TX SERIES GEMINI

OWNER MANUAL

IMPORTANT
OPERATING
SAFETY AND
MAINTENANCE
INSTRUCTIONS

HOLDEN GMH

A WORD TO GEMINI* OWNERS

This manual has been prepared to acquaint you with the operation and maintenance of your vehicle and to provide important safety information. We urge you to read this publication carefully and follow its recommendations to help assure enjoyable and trouble-free operation of your vehicle. When it comes to servicing remember that a GMH Dealer has the trained personnel, the specialized equipment and the interest to assist you with your service needs.
Return to a GMH Dealer for Guardian Maintenance Service and any other assistance you may require.

To assist Dealers in handling your needs, General Motors-Holden's maintains Zone Offices in each mainland State capital. Should you have a problem that cannot be handled through normal channels, follow the procedure presented in this manual under the heading, Owner Relations.
We would like to take this opportunity to thank you for choosing a General Motors-Holden's product — and assure you of our continuing interest in your vehicle's operation and your satisfaction.

GENERAL MOTORS-HOLDEN'S

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GEMINI 'TX' OWNER MANUAL

This Manual should be considered a permanent part of the vehicle and must remain with the vehicle at the time of resale.

General Motors-Holden's sell their products in many countries. However, in the event that it is intended to take the vehicle outside the area or country where it was purchased, it is advisable to check with a Zone Office of General Motors-Holden's to ascertain whether maintenance service and spare parts will be available in the areas where it is contemplated travelling.

As the policy of General Motors-Holden's is one of continual product improvement, all specifications and equipment are subject to change without notice.

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SECTIONS		PAGE
Preface		
	• Running In	2
	• Safe Driving Hints	3
	• Safety Features	4
1.	Before Driving Your Vehicle	5
2.	Starting and Operating	17
	• Exhaust Gas	17
	• Steering Column Controls	18
	• Starting and Driving	20
	• Transmission Controls	21
	• Floor Controls	25
	• Instrument Panel	28
	• Instrument Panel Controls	31
	• Ventilation Systems	33
3.	In Case of Emergency	36
4.	Appearance Care	43
5.	Service and Maintenance	50
6.	Specifications	68
7.	Owner Relations	73
8.	Dealer List	74
9.	Index	82
10.	Service Station Information	84

RUNNING IN

YOUR VEHICLES INITIAL PERIOD OF OPERATING

You can operate your new vehicle from the beginning without adhering to a formal break-in schedule. However, during the first few hundred kilometres of driving you can, by observing a few simple precautions, add to the future performance and economy of your vehicle.

We recommend speeds be held up to no more than 80 km/h (50 m.p.h.) during the first 500 kilometres (300 miles). After this initial period, speeds may be increased gradually but up to 1500 kilometres (1,000 miles) avoid driving for extended periods at any one speed, either slow or fast. Varying the speed to include some higher speeds, within the limits of the law, will promote longer life of parts and better economy of oil and fuel. Never subject your vehicle to full throttle acceleration or high speed until the engine is thoroughly warm and after 3000 kilometres (2,000 miles) has been covered.

It is also recommended that for the first 500 kilometres (300 miles), heavy braking should be avoided, except in the case of emergency, since brake misuse during this period could impair future braking efficiency.

If you plan to use your new vehicle for trailer (caravan) hauling see additional information on Page 14.

REFER PAGE 67 FOR ADDITIONAL INFORMATION ON

HOW TO IMPROVE YOUR FUEL ECONOMY

SAFE DRIVING HINTS & RECOMMENDATIONS

IMPORTANT

These items are listed as a safety reminder to you the owner. The appropriate section of this manual should be referred to for a more detailed explanation.

CARBON MONOXIDE

Avoid inhaling exhaust gases because they contain carbon monoxide, which is colourless and odourless. Carbon monoxide is a dangerous gas that can cause unconsciousness and is potentially lethal. (Refer to page 17.)

SEAT BELTS

Various road laws require the wearing of seat belts. It is important that the habit of using these should be developed by yourself and others using the vehicle. (Refer to page 10.)

In the interest of safety seat belts should be checked regularly. Your Dealer will inspect and check the belts for you as part of the normal Guardian Maintenance Service. Never attempt to modify or change the seat belt away from the original specification as this will affect the operation of the belts and reduce their effectiveness in preventing injury in an accident.

ANTI-THEFT IGNITION STEERING LOCK

DO NOT turn the ignition switch away from the ON position while the vehicle is in motion as this renders ineffective any power assisted equipment fitted to your vehicle.

Never select the LOCK position while the vehicle is in motion as this will lock the steering of the vehicle and render it inoperative.

LOOSE ARTICLES

Do not leave a loose load or articles on the rear window shelf. Stow articles in the luggage compartment or tie down if necessary. (Refer to page 5.)

BRAKE OPERATION

Driving through water may affect brake performance. Applying the brakes lightly will indicate whether they have been affected. To dry them quickly, lightly apply the brakes while maintaining a slow forward speed with an assured clear distance ahead until brake performance returns to normal. Brake pedal travel should not be obstructed by improper floor mats or other interfering material under the pedal. (Refer to page 25.)

POWER ASSISTED BRAKE

Where power assisted brakes are fitted:

Do not let the vehicle run down steep grades without the engine running.

Do not coast with the engine switched off. (Refer to page 27.)

TYRE TRACTION

A decrease in driving, cornering, and braking traction occurs when water, snow, ice, gravel, or other material is on the road surface. Driving practices and vehicle speed should be adjusted to the road conditions. (Refer to page 63.)

COOLING SYSTEM

If the cooling system is hot, the radiator cap must not be removed quickly — it should be rotated slowly to the first stop, which permits the pressure to release slowly through the overflow pipe. (Refer to page 56.)

PETROL FUMES

Always stop the engine and do not smoke or allow open flames or sparks near the vehicle when refuelling. If petrol fumes are noticed while driving, the cause should be determined and corrected without delay. (Refer to page 84.)

SAFETY FEATURES

THE COMPREHENSIVE LIST OF SAFETY FEATURES INCORPORATED IN THE "TX" SERIES MODELS IS LISTED BELOW

Seat Belts for all Occupants.

Energy Absorbing Steering Column and Steering Wheel.

Anti-Theft Combined Steering/Ignition Lock.

Tandem Brake Cylinder — Dual Hydraulic Circuits.

Knock-Out Type Internal Rear Vision Mirror Mounting and Shatter-Resistant Mirror.

External Rear Vision Mirror which is Glare Reduced.

Toughened Windshield with Modified Zone.

Safety Glass Windows.

Glare Reduced — Safety Padded Instrument Panel.

Recessed Instruments and Instrument Panel Controls.

Glare Reduced Instruments and Controls.

Low Profile Window Regulator Handles.

Sun Visors — Energy Absorbing.

Flush Fitting Lift-Up Exterior Door Handles.

Safety Door Locks — Rear Doors Childproof.

Electric Windshield Washer.

2-Speed Windshield Wipers with Glare Reduced Arms and Blades.

Back-Up Lamps.

Fusible Link in Wiring Harness.

3-Speed Heater/Demister Fan.

Combined Brake Failure and Parking Brake Warning Light.

Safety Flanges on Both Rims of Road Wheels.

Front Seat Head Restraints.

Flow Through Ventilation.

Hazard Warning Flasher.

Closed Crankcase Ventilation.

Evaporative Emission Control.

Exhaust Emission Control.

Front Fender Repeater Lamps.

SECTION – 1 BEFORE DRIVING YOUR NEW VEHICLE

SAFETY ASPECTS

BEFORE ENTERING THE VEHICLE

1. See that windows, mirrors and lights are clean.
2. Visually note inflation condition of tyres.
3. Check that area to rear is clear if about to back-up.

BEFORE DRIVING AWAY

1. Be sure you understand your vehicle and how to operate it safely.
2. Be sure all doors are secured and locked.
3. Position seat by adjusting as required.
4. Adjust inside and outside rear vision mirrors if necessary.
5. Fasten seat belts (refer Page 10 for Adjustment Procedure).
6. Check that the warning indicators glow when key is turned to the ON position.
7. Release the parking brake.

HIGHWAY SAFETY DEPENDS ON

1. YOU THE DRIVER
2. THE CONDITION OF YOUR VEHICLE
3. THE TRAFFIC AND HIGHWAY CONDITIONS

. . . BE SURE YOU UNDERSTAND ALL THREE!

CAUTION: Do not leave a loose load or articles on the rear window shelf. Stow articles in the luggage compartment and tie down if necessary.

The above action will prevent loose items from becoming dangerous projectiles in the event of a sudden stop or collision.

REMINDER: Proper Operation, Periodic Maintenance and Safety Inspections help provide

- Economical operation of your vehicle
- Safety for you and your passengers
- Dependable transportation

The following 10 items need regular and conscientious attention in the interest of safety.

If they require rectification an Authorised GMH Dealer will assist you.

BRAKES

ALL LAMPS

SEAT BELTS

STEERING AND WHEEL ALIGNMENT

TYRES — CONDITION & PRESSURES

EXHAUST SYSTEM

GLASS AREAS

WINDSHIELD WIPERS AND WASHERS

REAR VISION MIRRORS

HORN

SAFETY MEANS REGULAR INSPECTIONS

KEYS AND LOCKS

KEYS

Two keys are provided with your vehicle. Both keys are the same; one being supplied as a spare. The single key operates the ignition switch, the front door locks, the instrument panel compartment lock, the luggage compartment lock and the fuel filler locking cap.

The code number for the key is stamped on the key shaft. Before placing the key on your key ring, record the code number and place it in a safe place so that if the key is lost duplicates can be ordered by number from any GMH Dealer.

DOOR LOCK OPERATION

Exterior Lock and Handle

OPENING WITH KEY

Both front doors can be unlocked with the key from the outside by turning the top of the key towards the rear of the vehicle. With the lock in the unlock position the doors can be opened by lifting the finger bar upwards and outwards.

Interior Handle

OPENING WITH HANDLE

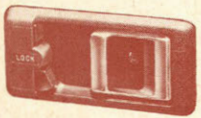
To open the doors from the inside pull the interior handle outwards, away from the door. The handle will spring back when released. The locking button must be in the unlock position i.e. with the lower button pushed in, otherwise the locking mechanism will free wheel.

LOCKING FROM THE OUTSIDE

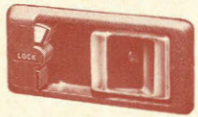
All doors can be locked from the outside by moving the inside locking button to the lock position while the door is open, then shutting the door with the finger bar in the lift position. In the interest of safety, all doors incorporate a free wheeling lock mechanism, prohibiting the doors being opened from the outside or inside unless the locking button is in the unlock position.

LOCKING FROM THE INSIDE

To lock the doors from the inside push in the upper locking button. To unlock, push in the lower locking button.



To lock push in the upper locking button.

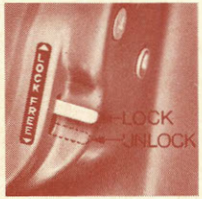


To unlock push in the lower locking button.

REAR DOOR CHILD-PROOF LOCK

Both rear doors can be child-proof locked by closing the doors with child-proof lock lever raised in the lock position. The doors cannot be opened from the inside regardless of the locking button position.

To unlock the child-proof lock, open the door from outside and lower the lever to the free position. The door will then operate normally.



COMPARTMENT LOCK OPERATION

INSTRUMENT PANEL COMPARTMENT LOCK

To lock, insert the key, rotate anti-clockwise one quarter of a turn and then withdraw.

To unlock, insert the key and rotate clockwise one quarter of a turn. The key should then be withdrawn before pushing the button in to allow the door to open downwards.

LUGGAGE COMPARTMENT LOCK

Insert the key and rotate clockwise to unlock. Due to the counter-balancing action, the lid will spring fully open for the stowing of luggage.

To shut, simply lower the lid to a position a small distance above the closed position, then quickly and firmly push downwards to engage the lock.

REMINDER: Do not leave the key inside the luggage compartment or in the lock.

FUEL FILLER LOCKING CAP

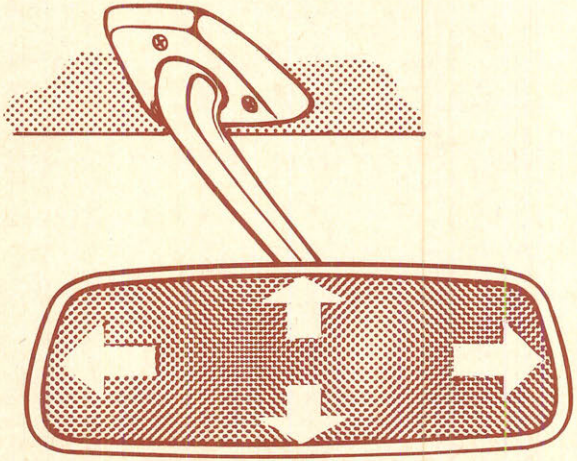
The fuel filler is located behind the hinged louvre on the right hand side (driver's side) rear roof pillar.

To remove the filler cap, insert the ignition key into the lock and turn it anti-clockwise, then turn the cap anti-clockwise until it becomes free. To replace the filler cap, install it on the filler neck with the arrow pointing towards the front of the vehicle. Align the projected portions of cap with grooves in neck and depress and turn the cap clockwise, then turn the key clockwise to lock.

REAR VISION MIRRORS

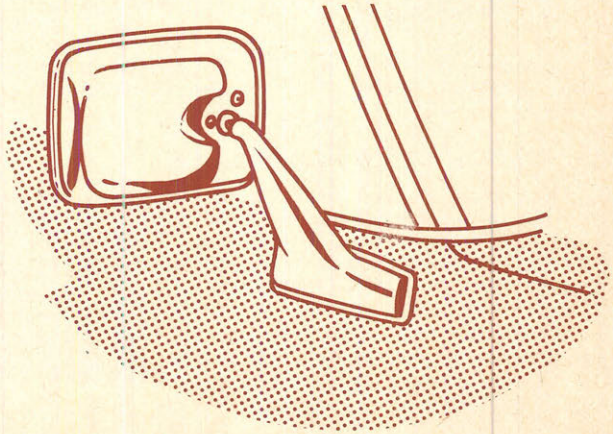
INTERNAL REAR VISION MIRROR

The internal rear vision mirror is shatter-resistant and is mounted on the safety type skid windshield header panel. The design incorporates a break away attachment which will allow the mirror and its mounting to be knocked out as a result of accidental impact, thus lowering the chance of injury.



EXTERNAL REAR VISION MIRROR

Mounted on the outside of the driver's front door, is a glare-reduced mirror that can be adjusted by means of a ball type swivel joint, thus providing the driver with a means to assist in observing traffic which may be about to pass or is in the adjacent traffic lane. The mirror is so designed that, should the driver inadvertently steer his vehicle too close to an obstruction or pedestrian, the mirror can deflect out of harm's way. Adjustment of this mirror should be correct only when the driver's head is in the normal driving position, otherwise the purpose of the mirror is negated.



FRONT SEAT ADJUSTMENT

BUCKET SEAT

FRONT-REAR CONTROL

Each bucket seat has a forward and rearward adjustment control. The adjustment control lever is located to the right of centre at the lower front of the seat. Move the lever across to the right to unlock the adjustment catch.

Try to move the seat after adjusting to check that the catch is fully engaged.

RECLINING BACK CONTROL (Where Fitted)

The reclining mechanism is controlled by a lever on the outer side of the seat, located at the bottom of the seat back.

By raising the lever, the reclining position of the seat can be changed through a large angle, as desired.

When the desired angle is obtained and the lever is released, the seat back will be locked firmly.

Coupe Models: For the convenience of entry or exit of rear seat passengers, the left hand (passenger side) seat back, in addition to the reclining mechanism lever, has a release catch lever adjacent to the bottom outer side of the seat back. This lever should be moved forward to release the catch enabling the seat back to tilt forward.

The right hand (driver's side) seat back tilt forward movement is controlled by the single lever located at the bottom outer side of the seat back.

WINDOW CONTROLS

DOOR WINDOWS

All door windows are lowered or raised by use of the low profile window regulator handles.

REAR QUARTER WINDOWS

Coupe models have two opening rear quarter windows. To open, pull the catch at the rear of the window upwards and inwards and then push the centre of the catch to hold the window in the fully open position. When closing the window reverse this procedure making sure that the catch is pushed completely shut.

SEAT BELTS

GENERAL NOTES

Australian Design Rules require Seat Belts to be fitted as standard equipment; therefore, this section should be carefully studied.

In the interest of safety seat belts should be checked regularly. Your Dealer will inspect and check the belts for you as part of the normal Guardian Maintenance Service. Never attempt to modify or change the seat belt away from the original specification as this will affect the operation of the belt and reduce their effectiveness in preventing injury in an accident.

WARNING: Seat belts are designed to bear upon the bony structure of the body, and should be worn low across the front of the pelvis, or the pelvis, chest and shoulders, as applicable; wearing the lap section of the belt across the abdominal area must be avoided.

Seat belts should be adjusted as firmly as possible, consistent with comfort, to provide the protection for which they have been designed. A slack belt will greatly reduce the protection afforded to the wearer.

Care should be taken to avoid contamination of the webbing with polishes, oils and chemicals, and particularly battery acid. Cleaning may safely be carried out using mild soap and water. The belt should be replaced if webbing becomes frayed, contaminated or damaged.

It is essential to replace the entire assembly after it has been worn in a severe impact even if damage to the assembly is not obvious.

Belts should not be worn with straps twisted.

Each seat belt assembly must only be used by one occupant; it is dangerous to put a belt around a child being carried on the occupant's lap.

RELEASING BELTS

To release all belts simply depress the release button located in the centre of the buckle.

CARE OF SEAT BELTS

Keep the belts clean and dry. Clean with a mild soap solution and lukewarm water. Keep sharp edges and damaging objects away from the belts.

Periodically, inspect the belts, buckles and anchorage points. Damage or fraying that could lessen the effectiveness of the system should be eliminated by replacing the belt assemblies. Do not bleach or dye the belts since this can cause severe loss of strength as also will contamination of the webbing with polishes, oils or chemicals — particularly battery acid.

USING SEAT BELTS

Various road laws require the wearing of seat belts. It is important that the habit of using these belts should be developed by yourself and others using the vehicle.

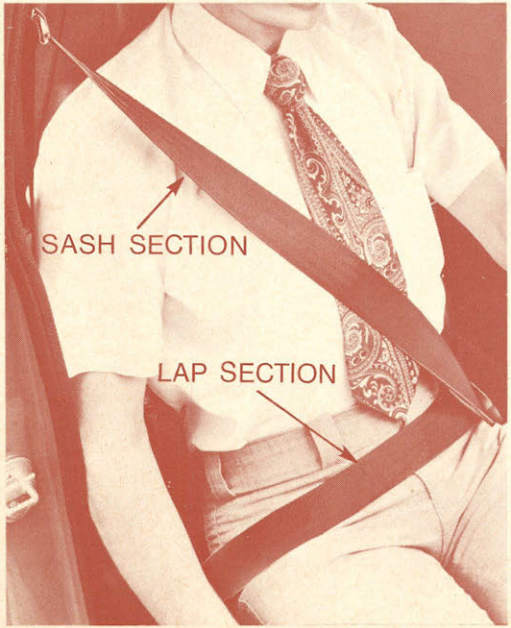
The adjustment and operating instructions are detailed in this Section together with the Seat Adjustment it being important that both positions be comfortable in order that the driver may devote his entire attention to the job of driving and observing the road.

IMPORTANT: Don't use belts that are twisted — untwist them before making any adjustments and be sure that they contour around the body comfortably when adjustments are complete.

(Refer to the following pages for important instructions).

LAP/SASH COMBINATION BELT

A firm, low position across the pelvis by the lap section of the Lap/Sash Combination Belt is essential in order that the force exerted by the Lap Belt in a collision may be spread over the strong hip bone structure and not across the soft abdominal area.



EMERGENCY LOCKING RETRACTOR TYPE

This type of seat belt allows the wearer to move bodily while the seat belt is fastened. It is also dual sensitive.

The first way the locking mechanism is activated is by sudden changes of vehicle speed or vehicle direction, as in the case of firm brake application or vehicle impact during an accident. This phase of the retractor mechanism's operation can be tested by allowing the body to be restrained only by the belt during firm application of the vehicle brakes, at between 2-5 km/h (brisk walking speed) under safe conditions. The belt should lock immediately, stopping all belt movement.

The second way the locking mechanism is activated is by a sudden extension of the belt from the retractor housing. This phase of the retractor mechanism's operation can be tested by holding the belt tightly and giving it a sudden firm jerk. The retractor mechanism should lock immediately, stopping all belt movement.

These checks should be carried out regularly.

WARNING: No modifications or additions should be made by the user which will either prevent the seat belt adjusting devices from operating to remove slack, or prevent the seat belt assembly from being adjusted to remove slack.

TONGUE RESTRICTOR

This belt system incorporates a tongue restrictor which can be moved along the belt to locate and hold the tongue in any desired position.

WARNING: The positioning of the tongue restrictor must never interfere with or stop the belt from fully retracting.

BELT ADJUSTMENT

1. Adopt a satisfactory seating position.
2. Bring the metal tongue across the body and snap home the Tongue into the Buckle.
3. After fastening, settle the belt by running a hand under the belt, starting at the outer hip area, then across to the tongue and up the sash section. This will feed back unwanted belt length to the retractor.
4. Finally check the fit and adjustment.

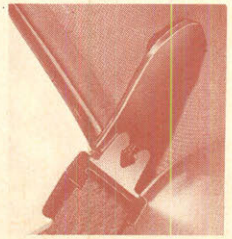
NON-RETRACTOR TYPE

BELT ADJUSTMENT

1. Adopt a satisfactory seating position.
2. Bring the metal Tongue across the body and snap home the Tongue into the Buckle.
3. Adjust the belt to obtain a firm fit. A firm, low position across the pelvis by the lap section of the Lap/Sash Combination Belt is essential in order that the force exerted by the Lap Belt in a collision may be spread over the strong hip bone structure and not across the soft abdominal area.
   To Lengthen — Tilt the belt adjuster and then pull the belt at a point below the finger grip bar.
   To Shorten — Tilt the belt adjuster and use the serrated Finger Grip Bar to pull the belt through the belt adjuster.
4. Finally check the fit and adjustment.

BELT STOWAGE

Stowage of the outer section of the belt, is provided by a hook located on the upper mounting protective cover. These hooks should be used when the belts are not in use to keep them away from door openings.



LAP TYPE BELTS

BELT ADJUSTMENT

1. Adopt a satisfactory seating position.
2. Bring the Tongue Adjuster across the body and snap home the Tongue into the Buckle.
3. Adjust the belt to obtain a firm fit. A firm low position across the pelvis is essential in order that the force exerted by the lap belt in a collision may be spread over the strong hip bone structure and not across the soft abdominal area.

   To Lengthen — Tilt the Tongue Adjuster and pull the belt to the right of the finger grip bar.

   To Shorten — Tilt the Tongue Adjuster and use the serrated Finger Grip Bar to pull the belt through the Tongue Adjuster.

BELT STOWAGE

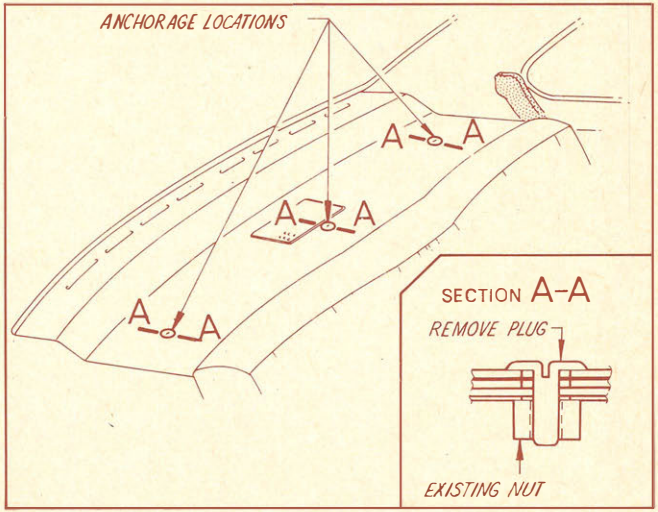
When not in use these belts should be kept with the tongue latched into the appropriate buckle.

INFANT AND CHILD RESTRAINTS

CAUTION: Children in automobiles should be restrained to reduce the risk of injury in accidents, sudden stops or other hazardous situations.
General Motors-Holden's Dealers can advise you about restraint systems designed specifically for use with infants and small children.

WARNING: Child restraint anchorages are designed to withstand only those loads imposed by correctly fitted child restraints. Under no circumstances are they to be used for adult seat belts or harnesses.
Anchorage points for child restraint systems will be provided behind the rear seat of sedan and coupe models manufactured by General Motors-Holden's Ltd., after June 30th, 1976. The location of the anchorage points are shown below.
In using any infant or child restraint system, read and comply with all installation and usage instructions. All unused seat belts should be stowed properly to help prevent them causing injury in the event of an accident.
If a child is travelling in a vehicle not equipped with an approved infant or child restraint or an alternative restraint system, the following precautions should be taken.

1. Infants unable to sit up by themselves should be restrained by placing them in a covered, padded bassinet which is placed crossways in the vehicle (widthwise) on the rear seat. The bassinet should be securely restrained with the regular vehicle seat belts.
2. Children able to sit up by themselves should be placed on a seat and restrained with a seat belt. If the sash section of the belt causes neck or face irritation due to the child's size, this may be reduced in some cases by positioning the child further towards the centre of the vehicle. If serious discomfort continues, the child should be lap belted in the rear seat. Never allow a child to stand of kneel on any seat.
3. General Motors-Holden's recommends that children be restrained properly when riding. However, if unusual conditions prohibit the use of restraints and require that a child must stand, use the floor directly behind the front seat. This will help minimize the possibility of injury from frontal impacts in the event of an accident.



TRAILER (CARAVAN) HAULING

Since passenger vehicles are designed and intended to be used primarily as a passenger conveyance, towing a trailer could affect handling, durability and economy. Maximum safety and satisfaction depend upon the proper use of correct equipment and avoiding overloading and other abusive operations such as that which can occur in rough or hilly terrain.

The maximum loaded trailer weight which you can pull with your vehicle depends on the special equipment that has been installed and the load limits that apply to the model. **(Do not exceed the ratings on Page 15.)**

TONGUE LOAD

To assist in maintaining good handling of a vehicle-trailer combination, it is important that the vertical load at the trailer attachment coupling be approximately 10% of the loaded trailer weight. This weight distribution can be checked by weighing the loaded trailer first, then checking the load at the attachment coupling, before coupling the trailer to the tongue on the vehicle.

TYRES

When towing a trailer the vehicle's tyres should be inflated to the highest recommended inflation pressures. The rear axle load has to be reduced by an amount equal to the tongue load on the vehicle (i.e. the 10% of the trailer weight) if an equalizing load levelling hitch is not fitted. However, where the latter type of trailer attachment is fitted, it is not necessary to reduce the vehicle's load due to the effect of the attachment's operation, provided the maximum rear axle loading and maximum loaded vehicle weights are not exceeded. (Refer Page 65, Vehicle Weight Chart.)

MAINTENANCE — AUTOMATIC TRANSMISSION

More frequent vehicle maintenance is required when using your vehicle to pull a trailer. Where an automatic transmission is fitted the transmission fluid will need to be changed every 12 months or 20,000 kilometres (12,000 miles). (Refer Section 5 also.)

RUNNING IN PERIOD

It is recommended that your new vehicle be operated for 1500 kilometres (1,000 miles) before trailer towing. If it is necessary to tow during this period, avoid speeds over 80 km/h (50 m.p.h.) and full throttle starts. The same precaution should be observed whenever a new or reconditioned engine, transmission or rear axle has been installed in the vehicle.

ELECTRICAL CONNECTION

To facilitate connection of the trailer wiring to the vehicle's electrical system, a special wiring harness, which provides protection against overloading the turn signal electrical system, is available through any GMH Dealer or a GM Parts and Accessories stockist. This is the only system recommended by GMH. Use of a non-genuine connection could affect the warranty on the wiring of your vehicle.

CAUTIONS:

1. **Do not use axle-mounted hitches. They can cause damage to the axle housing, wheel bearings, wheels or tyres.**
2. **Trailer brakes are required on trailers over 340 kg (750 lbs.) loaded weight except where State Laws may list a lower limit.**
3. **Do NOT tap into the vehicle's hydraulic brake system. Operation of the trailer brake system by tapping into the vehicle's hydraulic brake system would require fluid displacement from the vehicles master cylinder. THE VEHICLE'S MASTER CYLINDER FLUID CAPACITY WILL NOT BE SUFFICIENT TO OPERATE BOTH BRAKE SYSTEMS UNDER ALL CONDITIONS.**
4. **Whenever a tow-bar is removed be certain to have any mounting holes in the underbody properly sealed to prevent the possible entry of exhaust fumes, dust and water.**

PERMISSIBLE OPERATING LOADS

Before contemplating the towing of a trailer or caravan, it is necessary to check that the correct equipment is fitted to the vehicle to cover both the legal and manufacturer's requirements. Therefore, the matter should be discussed with a GMH Dealer.

APPLICATION	ALL MODELS	
"A". No brakes fitted to trailer.	— A —	— B —
"B". Fitted with independently operated trailer brakes.		
Maximum Trailer Weight (Tare Weight plus all load)	340 kg	680 kg
	750 lb.	1,500 lb.
Nominal Static Weight to be imposed on the Vehicle Tow-Bar Tongue by the Trailer (10% of the Trailer Weight)	†34 kg	†68 kg
	†75 lb.	†150 lb.

†This weight must be included as part of the load carrying capacity of the vehicle. (Refer Page 65)

DRIVING HINTS WHEN TOWING

1. Remember that a vehicle's acceleration, braking and ability to negotiate rough and/or winding roads, etc., are all impaired by the extra weight of a caravan or trailer. During summer time the desired performance should be gauged to avoid overheating the engine and transmission. Making a couple of short distance trial runs is a good way of regaining the feel of your caravan. This will eliminate surprises when you pull out of your driveway on the first leg of a long journey to a holiday resort.

2. Have your engine tuned up and spark plugs cleaned or replaced before you depart.

3. Equip your vehicle on both sides with the extended arm rear vision mirrors necessary to see behind your caravan adequately.

4. Headlamps should be re-aimed for correct setting after the vehicle has been loaded and the trailer coupled.

5. When descending steep grades, don't continually apply the brakes to maintain safe speeds. Instead, use a lower gear, permitting the engine to provide a portion of the required braking action.

   Automatic Transmission — (Refer Page 23) for use of 2 or 1 position).
   Riding the brake pedal heats up the brakes and reduces braking effectiveness.

6. If your trailer runs off the paved highway surface on to the shoulder, resist the temptation to quickly turn the steering wheel to bring the trailer back on the road. Instead, allow the left wheels of the vehicle to also run off on to the shoulder. Then, wait for a good opportunity to steer the vehicle back on to the road. This will prevent an abrupt swerving reaction and will keep you safely in the traffic lane.

7. Keep your windshield clean, which also means keeping a regular check on the level of the windscreen washing solution container. (Refer Page 59) for Windshield Cleaning.)

8. Make sure the vehicle's radiator is not covered by insects.

9. Be careful to observe all Road Laws, regarding trailer and caravan towing, e.g. Ensure that
   —a hitching chain is fitted.
   —the ball or tongue does not obscure the number plate on your vehicle when the caravan is not hitched.
   —the number plate on your caravan is visible at all times.

SECTION – 2 STARTING AND OPERATING

EXHAUST GAS

CARBON MONOXIDE WARNING

Avoid inhaling exhaust gases because they contain carbon monoxide, which is colourless and odourless. Carbon monoxide is a dangerous gas that can cause unconsciousness and is potentially lethal.

The best protection against carbon monoxide entry into the driving compartment is a properly maintained engine exhaust system. If you notice a change in the sound of the exhaust system, if exhaust fumes are smelled or detected in any other way inside the vehicle, or if the exhaust system or rear of the vehicle is damaged the vehicle should be taken to a GMH Dealer for inspection.

Have them inspect the complete exhaust system and underbody area for broken, damaged, missing or mispositioned parts, open seams, holes, or loose connections, or other deterioration which could permit exhaust fumes to seep into the driving compartment. Dust or water in the vehicle may be an indication of a problem in one or these areas.

It is recommended that the vehicle be inspected each time it is raised for lubrication.

If at any time you suspect that exhaust fumes are entering the driving compartment have the cause determined and corrected as soon as possible. Use genuine GM parts recommended for your vehicle for any repairs which may be necessary.

If you must drive under these conditions, drive only with all windows fully open.

CAUTION: Sitting in a parked vehicle with engine running for an extended period is not recommended.

Do not run the engine in confined areas such as garages any more than necessary to move the vehicle in or out of the area.

When the vehicle is stopped in an unconfined area with the engine running for any more than a short period, the following instructions should be observed.

Move the air source lever to the OFF position and switch the fan to the 3 position to pressurize the interior of the vehicle.

The luggage compartment lid should be closed at all times during normal driving operations, to prevent exhaust gases being drawn into the vehicle.

However, if for some reason the rear compartment has to remain open while travelling, the following precautions should be observed:

1. Close all windows and fully open whatever ventilation system is fitted. (Outlined above.)
2. Do not exceed 50 km/h (30 m.p.h.) unless necessary, according to traffic conditions and regulations.

EXHAUST POLLUTION AND YOUR NEW VEHICLE

Your new vehicle has been designed and equipped with several engine, carburation components and modifications which are intended to minimize the emissions of harmful exhaust pollutants. Refer to the Emission Control Owner's Handbook supplied with the vehicle. One of the requirements for assurance that your vehicle will continue to operate as designed in regard to exhaust emissions and driveability, is the need for proper owner maintenance.

STEERING COLUMN CONTROLS

ANTI-THEFT IGNITION STEERING LOCK

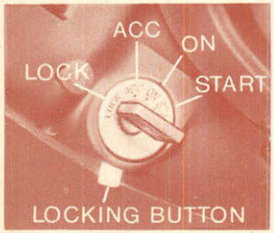
The anti-theft lock is located on the right hand side of the steering column and has four positions:

LOCK (Normal Parking Position) — Locks the ignition and provides an added theft protection by preventing normal operation of the steering wheel. The key cannot be returned to LOCK position without depressing the locking button situated under the switch.

ACC (1st Forward from Lock) — Permits operation of electrical accessories when the engine is not running.

ON (2nd Forward from Lock) — Normal operating position. The ignition circuit and electrically operated instruments and equipment are energised.

START (3rd Forward from Lock) — Permits engagement of the starter. When released, the switch returns to the ON position.



PARKING

When leaving your vehicle unattended,

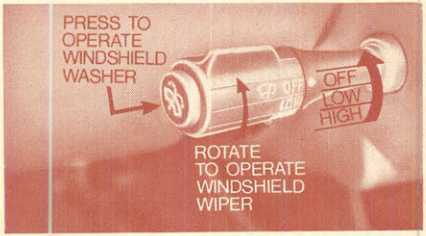
1. Apply the parking brake (Refer to Page 27).
2. Place transmission selector in:
   Reverse — Manual Transmission.
   Park — Automatic Transmission.
3. Turn key to LOCK position.
4. Remove key.
5. Lock all doors and windows.

CAUTION: DO NOT TURN THE IGNITION SWITCH AWAY FROM THE 'ON' POSITION WHILE THE VEHICLE IS IN MOTION AS THIS RENDERS INEFFECTIVE ANY POWER ASSISTED EQUIPMENT FITTED TO YOUR VEHICLE.

NEVER SELECT THE 'LOCK' POSITION WHILE THE VEHICLE IS IN MOTION AS THIS WILL LOCK THE STEERING OF THE VEHICLE AND RENDER IT INOPERATIVE.

WINDSHIELD WIPERS AND WASHERS

The windshield wiper and washer switch is located on the left hand side (passenger's side) of the steering column and operates when the ignition switch is in the ON or ACC position.



WIPER OPERATION

The windshield wipers can operate at either high or low speed by turning the switch anti clockwise until the desired position is in line with the white dot on the switch. To switch the wipers off turn the switch until the OFF mark is in line with the white dot.

WASHER OPERATION

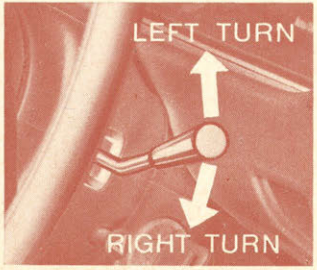
By depressing the wash button in the end of the wiper control the electric washer pump is activated spraying jets of fluid onto the area swept by the wiper blades. Washer fluid supply will only continue while the button is depressed.

TURN SIGNAL/HIGH BEAM COMBINATION SWITCH

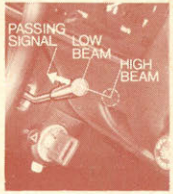
TURN SIGNAL OPERATION

The turn signal (Direction Indicator) lights, operate with the ignition switch in any position.

When the turn signal lever is moved up or down, a tell-tale green light will flash intermittently, indicating in which direction it is intended to turn. As the steering wheel returns to the straight ahead position, the indicator mechanism automatically cancels the signal and the lever returns to its neutral position. Both the front and rear external turn signal lights will flash together according to the direction selected. Proper functioning of the turn signal lamps is indicated by normal flashing of the green tell-tale lights on the instrument panel as well as by an audible clicking signal from the flasher timing unit. If the tell-tale signal should increase appreciably in flashing speed and the clicking signal is not audible or if the tell-tales do not flash when the turn signals are operated, a malfunction exists in the system, which should be attended to immediately in the interest of your safety and other road users.



HEADLAMP HIGH BEAM OPERATION



The turn signal lever is also used to change the headlamp beam from high to low or low to high. Each time the lever is moved, the light beam changes. A headlamp beam indicator, on the instrument panel, lights up when the headlamp is on high beam.

Move the lever rearward (toward the steering wheel) for low beam and forward (away from the steering wheel) for high beam.

Raising the lever toward the steering wheel beyond the low beam position operates the headlamp high beam regardless of the light control switch position and can be used as a passing signal.

The lever returns to the low beam position when released.

HAZARD WARNING SWITCH

The control switch knob can be identified by the double triangle outline in the knob face and it is located adjacent to the ignition switch. Should it be necessary to stop the vehicle at the side of the road for emergency reasons, the switch knob should be pulled out. This will cause the four turn-signal lamps to flash simultaneously, as a warning to traffic which may approach from either direction.

HORNS

A single low note horn is fitted to the Gemini sedan while the Gemini SL sedan and coupe have both a low note and a high note horn fitted.

The horn is operated by pressing either of the two insert buttons which are situated in the steering wheel.
The horn can be operated at any time.

STARTING AND DRIVING

The following suggestions for starting and driving should be followed for best operation of your new vehicle:

PARKING BRAKE

Ensure that the parking brake is firmly applied.

MANUAL TRANSMISSION

Depress the clutch and check that the gear shift lever is in NEUTRAL.

AUTOMATIC TRANSMISSION

Check that the selector lever is in either the N or P position, otherwise the Neutral Safety Switch will not allow the engine to start.

ENGINE

COLD OPERATION: These engines are equipped with an automatic choke system. Before starting a cold engine the accelerator pedal should be fully depressed two or three times then released. This action sets the choke system for starting and injects fuel into the intake system. Turn the ignition key to the START position. If the vehicle has been standing for several days it may be necessary to repeat this procedure several times until the engine starts. After the engine starts, allow it to run at fast idle setting in NEUTRAL for approximately 20 to 30 seconds to promote quick warm-up. After the vehicle is driven off, the automatic choke system will gradually move to the inoperative position as the engine reaches normal operating temperature.

NOTE: Pumping the accelerator pedal can cause flooding and difficulty in starting. Should this occur, depress and hold the accelerator pedal fully to the floor while holding the ignition key in the START position. After the engine starts, allow the accelerator pedal to return to the closed throttle position.

WARM OPERATION: Depending on engine temperature and for starting during warm summer months, the choke may operate only briefly or not at all. Starting can be accomplished by fully depressing then slowly releasing the accelerator pedal. Turn the ignition key to the START position. After the engine starts let it idle in NEUTRAL for approximately 20 to 30 seconds before driving off.

INITIAL RUNNING

Always let a cold engine run at a fast idle speed for 20 to 30 seconds after starting and drive at a moderate speed for the first 5 to 10 minutes, particularly during cold weather,

TRANSMISSION CONTROLS

MANUAL TRANSMISSION

This transmission incorporates four (4) fully synchronised gears and a non-synchronised reverse gear.
The gear selection is as indicated by the shift pattern. Selection of forward gears should normally take place on a 1-2-3-4 sequence co-ordinating the clutch and accelerator pedal operation as required.

FIRST GEAR (LOW) — Having a synchromesh engagement, this gear can be engaged while the vehicle is moving in order to avoid overloading the engine, up to 25 km/h (15 m.p.h.).

SECOND GEAR (LOW INTERMEDIATE) — Use this gear at slow speeds — less than 50 km/h (30 m.p.h.) when driving in traffic conditions. Also this gear gives improved acceleraton and retardation when negotiating steep gradients, under suitable conditions.

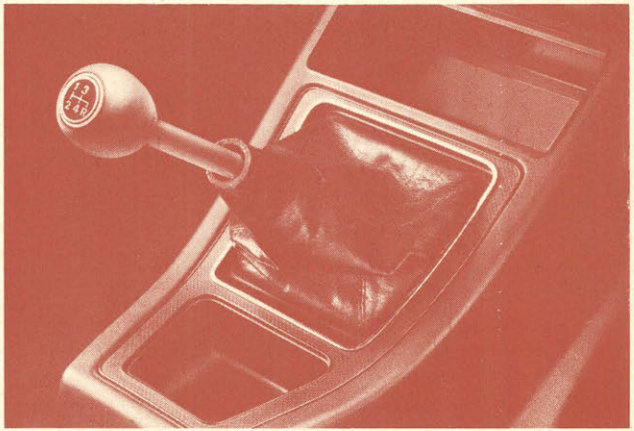
THIRD GEAR (HIGH INTERMEDIATE) — Use this gear for acceleration and retardation in the higher speed range of 50 to 80 km/h (30 to 50 m.p.h.) and where highway conditions are appropriate.

FOURTH GEAR (HIGH) — To be used for normal cruising down to approximately 50 km/h (30 m.p.h.) but an intermediate gear should be selected when acceleration or retardation is desired.

REVERSE — This gear must only be selected when the vehicle is stationary. A **pause** after depressing the clutch pedal is desirable before moving the lever into R as indicated by the shift pattern.
The lever knob must be pulled against spring pressure to pass into the R gate path.

BACK-UP LAMPS

When REVERSE is selected and the Ignition Switch is in the ON position, the rear turn-signal lamps will operate continuously.



AUTOMATIC TRANSMISSION

This transmission is of an automatic three-speed design. The shift patterns are arranged with PARK (P) position at one end followed in sequence by R (REVERSE), N (NEUTRAL), D (DRIVE), 2 (SECOND) and 1 (LOW). The automatic transmission is connected electrically through a neutral safety switch designed to permit starting of the engine **only** when the transmission selector is in PARK or N positions. After starting the engine you need only to select the range desired (normally D), release the parking brake and gradually depress the accelerator. Gradual accelerator pressure will give the best fuel economy — Hard acceleration gives top performance, but lowers the fuel economy.

For additional braking effect, as is sometimes needed in mountainous terrain, select either 2 or 1 positions (Refer to later notes regarding speed limit recommendations).

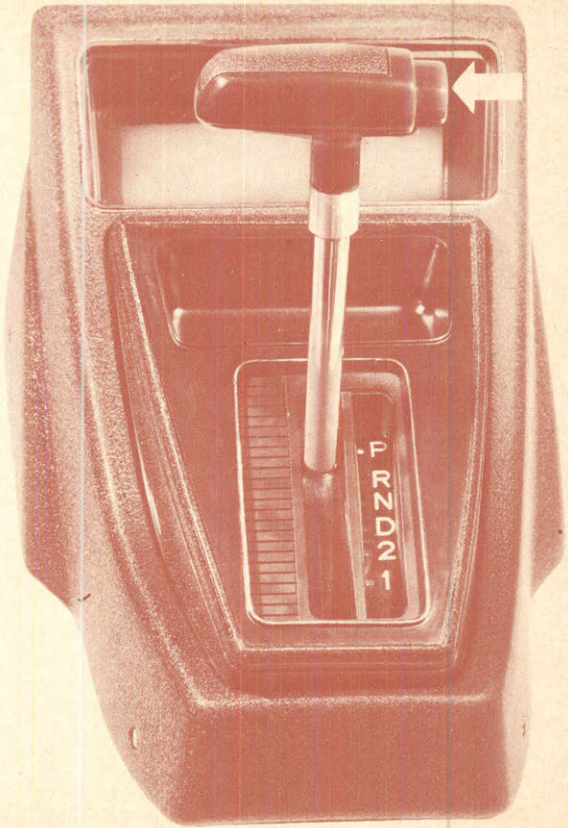
FLOOR SHIFT This console located T-Handle shift lever features a straight-line movement.

Shift Lever Sequence: P to 1 — Depress thumb-button to move from P.

Release of button in R will still allow selection through to N, to D to 2. Depress button again to select 1.

Shift Lever Sequence: 1 to P.
1 to 2 to D to N can be selected without depressing the thumb-button. Depress button to select R or P.

NOTE: By keeping the thumb-button depressed, selection through from 1 to P or P to 1, and any intermediate positions can be made.



THE OPERATIONAL PROCEDURES FOR EACH SELECTOR POSITION ARE:—

P **PARK** — This position is to be used in conjunction with the parking brake. P must never be selected when the vehicle is in motion. It is one of only two positions (the other is N) in which your vehicle may be started.

R **REVERSE** — For reversing; the vehicle must be stationary before selecting this gear.
(Refer to Page 21 for Back-up Lamps.)

N **NEUTRAL** — This position can be used to start the engine, especially if the vehicle is moving with a stalled engine; but never select N while driving normally. Also, if the vehicle has to be towed with the rear wheels on the ground, this position must be used.
(Refer also to Page 42.)

D **DRIVE** — For all normal forward driving. This position allows for the acceleration and cruising adequate for all but the most crucial driving situations. It permits the transmission to operate through its complete range of gear ratios and select the proper ratio for road and load conditions.

2 **SECOND** — This position may be selected when travelling down a moderate grade where slight braking action is desired without brake application and the transmission will shift to second gear when the selector lever is placed in 2.
Do not select 2 over 110 km/h (70 m.p.h.) to avoid over-revving the engine.

1 **LOW** — This position may be selected for maximum braking down severe grades. When the selector lever is moved to 1, the transmission will shift to first gear. The transmission selector lever must be shifted back to 2 or D positions before the transmission will again upshift.
Do not select 1 over 65 km/h (40 m.p.h.) to avoid over-revving the engine.

PASSING (Full Throttle Detent)

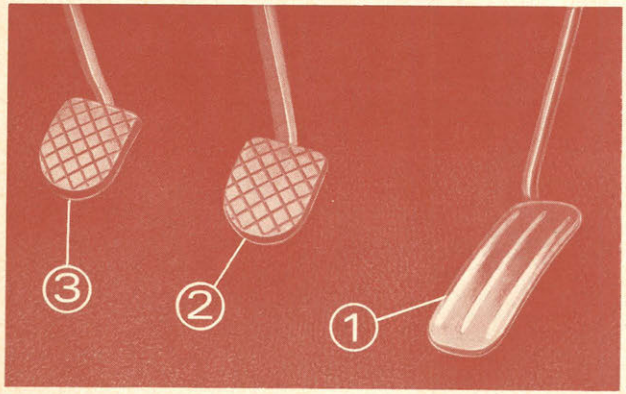
While driving, if the accelerator pedal is pressed down hard, in order to accelerate or pass other traffic, the following shift changes will normally occur automatically. The speeds given are only an indication as they may vary according to the rear axle and tyre options fitted.

SELECTION	SPEED RANGES	EFFECT
SHIFT LEVER IN D		
Over	110 km/h (70 m.p.h.)	No Change
Under	95 km/h (60 m.p.h.)	Changes to Second Gear
Under	50 km/h (30 m.p.h.)	Changes to First Gear
SHIFT LEVER IN 2		
Over	65 km/h (40 m.p.h.)	No Change
Under	50 km/h (30 m.p.h.)	Changes to First Gear
SHIFT LEVER IN 1		
Don't Exceed	65 km/h (40 m.p.h.)	No Change

AUTOMATIC TRANSMISSION — DRIVING DONT'S

- Do not use high engine R.P.M., with the brakes applied in 1, 2, D or R positions as this will cause damage to the transmission by overheating.
- Do not hold the vehicle on an upgrade by increasing engine R.P.M. Use the brakes.
- Do not shift selector into R or P position before coming to a complete stop.
- The vehicle tends to creep or move when the selector is moved to 1, 2, D or R positions. Application of the main brake or parking brake will hold the vehicle until motion is required.
- Do not coast the vehicle in N range at any time. Leaving the vehicle in one of the driving positions allows the engine to supply some braking force when stopping and also helps keep your vehicle under control at all times.

FLOOR CONTROLS



1. Accelerator Pedal.
2. Main Brake Pedal.
3. Clutch Pedal (not with Automatic Transmission).

BRAKE OPERATION

CAUTIONS: Driving through water may affect brake performance. Applying the brakes lightly will indicate whether they have been affected. To dry them quickly, lightly apply the brakes while maintaining a slow forward speed with an assured clear distance ahead until brake performance returns to normal.

Brake pedal travel should not be obstructed by improper floor mats or other interfering material under the pedal.

Riding the brake by resting your foot on the brake pedal when not intending to brake, can cause abnormally high brake temperatures, excessive lining wear and possible damage to the brakes.

BRAKE WARNING LIGHT

(Refer to Page 30 — Indicator Lights.)

In the event of the warning light being activated while the vehicle is moving and after the main brake pedal has been firmly used, pull across to the side of the road, braking as carefully as possible, but remember that:

1. Stopping distance will probably be greater.
2. Greater pedal effort may be required.
3. Pedal travel should be greater.

Then, try, if the road gradient is considered sufficiently safe, to stop the vehicle from a low speed several times, bearing in mind that:

1. If you judge such operation to be safe, proceed cautiously at reduced speed to the nearest GMH Dealer for inspection and rectification.

OR

2. If in your opinion the vehicle is not safe to drive, have it towed to a GMH Dealer for inspection and repair.

CAUTION: Continued operation of the vehicle for normal use in this condition is dangerous.

NOTE: The addition of this warning indicator is not a substitute for the normal maintenance check of brake fluid level in the master cylinder.

DUAL CIRCUIT BRAKE SYSTEM

The foot operated brake system of your vehicle has two separate hydraulic systems — one operating the front wheels, the other operating the rear wheels. Hydraulic pressure is provided from the foot activated master cylinder, which is a tandem design, and provides the hydraulic pressure to each system.

Therefore, in the event of either the front or rear system being damaged and developing a fault through leakage, one set of wheels can still be effectively braked but greater pedal effort may be required.

An attentive driver should immediately be aware of any change in the operating feel from the brake pedal in regard to length of travel and brake effectiveness as related to the pedal effort applied — any change in normal operation at once indicates a non-standard condition and the situation should be carefully watched for a return to normality or checked at the nearest GMH Dealer or a service station, depending on the urgency of the situation.

DISC BRAKES (FRONT)

No adjustment is required as the disc brakes automatically adjust themselves to compensate for brake pad wear.

A dual piston fixed head caliper is used to operate the clamping of the brake pads against the disc faces.

Also, with this braking system, a proportioning valve is incorporated in the hydraulic system. The function of this valve is to help avoid premature rear wheel lock-up under emergency braking conditions.

DRUM BRAKES (REAR)

These are self-adjusting brakes which under normal driving operation eliminate periodic brake adjustment. The self-adjusting mechanism is actuated every time the brakes are applied firmly when the vehicle is moving in the reverse direction.

Should brake pedal travel become excessive, drive the vehicle backward and forward several times applying the brakes firmly to stop the vehicle without skidding the wheels. Pedal travel should return to normal after several reverse stops.

POWER ASSISTED BRAKE NOTES

Power assisted brakes utilize engine intake manifold vacuum to reduce the braking effort required at the pedal. A built-in vacuum reserve will supply two or more brake applications after the engine has stopped.

With the engine switched off and the vacuum reserve exhausted the vehicle can still be stopped but much more effort will be required applying the brake pedal.

CAUTION: Where power assisted brakes are fitted;

NEVER let the vehicle run down steep grades with the engine SWITCHED OFF.

NEVER coast with the engine SWITCHED OFF.

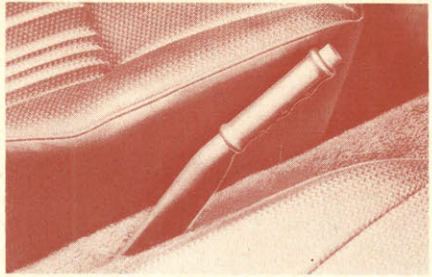
NEVER have the vehicle towed on four wheels without a solid connection between the towing vehicle. If necessary the vehicle will have to be towed by a tow-truck, i.e. with two wheels off the ground.

PARKING BRAKE

The parking brake activating lever is mounted on the floor between the two front seats.

To Apply. Pull the lever straight up using the grip at the end of the lever. **Do not press the release button.**

To Release. Pull the parking brake lever upwards while simultaneously pressing in the release button at the end of the lever with the thumb. After the ratchet system disengages, retain pressure on the button while lowering the lever until it is fully down. (Refer illustration.)



Parking Brake Operation

WARNING LIGHT

If the Ignition Switch is in the ON position, the warning light will operate while the brake is not fully released. When the brake has been released the brake warning light in the instrument panel will go out.
Never drive the vehicle with the warning light on.

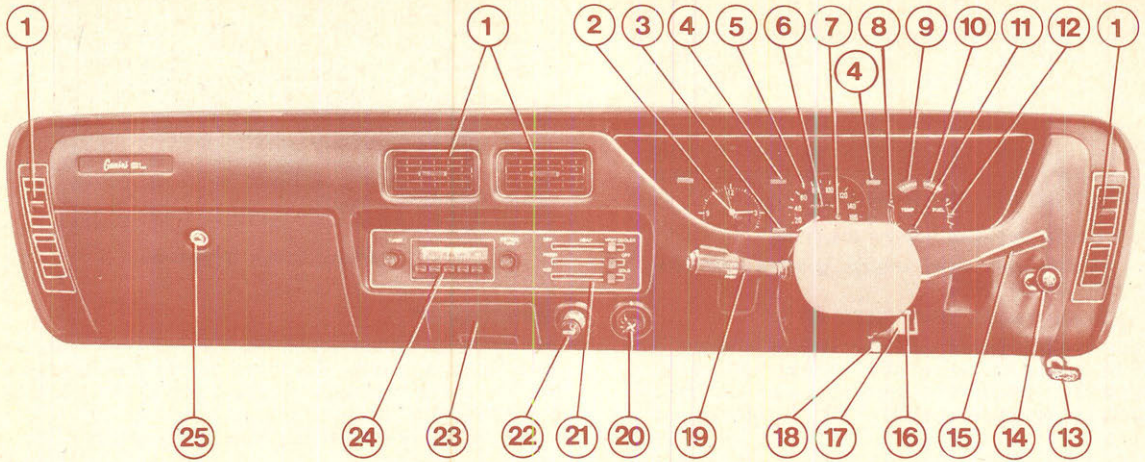
ACCELERATOR PEDAL

The accelerator pedal is used to open and close the carburettor throttle valve to vary engine power and thus regulate engine and vehicle speed.

CLUTCH PEDAL

On models equipped with a manual transmission, the clutch pedal is used to engage and disengage the clutch, thereby connecting or disconnecting the engine from the transmission, driveline and rear wheels. When the pedal is fully depressed the clutch is disengaged, disconnecting the drive from the transmission and the rear wheels.

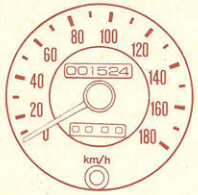
INSTRUMENT PANEL



1. Instrument Panel Vents.
2. Clock (where fitted).
3. High Beam Indicator Light.
4. Turn Signal Indicator Lights.
5. Speedometer.
6. Odometer.
7. Trip Meter.
8. Temperature Gauge.
9. Parking Brake Warning Light.
10. Generator Charge Light.
11. Oil Pressure Warning Light.
12. Fuel Gauge.
13. Engine Hood Release Knob.
14. Light Switch Knob.
15. Turn Signal/High Beam Control Lever.
16. Hazard Warning Switch.
17. Ignition Switch.
18. Ignition Switch Lock Button.
19. Windshield Wiper - Washer Control Lever.
20. Ventilation Fan Switch.
21. Ventilation Control Facia.
22. Cigarette Lighter.
23. Ash Tray.
24. Radio (where fitted).
25. Instrument Panel Compartment Lock.

INSTRUMENT DIALS

SPEEDOMETER AND ODOMETER

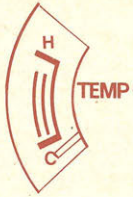


The Speedometer face incorporates the odometer digits to show the distance travelled in kilometres. The speedometer is calibrated from 0 to 180 kilometres per hour (km/h).
Also incorporated in the speedometer face is a trip meter which is used to record short distance trips. At the beginning of a trip reset the meter to zero by pushing in the reset knob and turning. At the end of the trip or at any stage during the trip the distance travelled in kilometres is shown on the meter.

FUEL GAUGE

This gauge is electrically operated to indicate the proportionate amount of fuel contained in the fuel tank. The gauge is activated when the ignition switch is turned to the ON position.
If the needle is operating towards the "E" area of the gauge it means that fuel level in the tank is getting low.

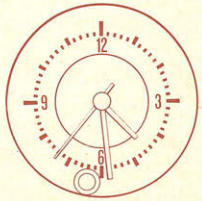
TEMPERATURE GAUGE



The gauge is calibrated to indicate the relative operating temperature of the cooling system. The centre area of the gauge is indicated by two parallel marks located between the "C" and "H" marks. When the gauge needle is in the range of the centre area, normal operating temperature is indicated. However, if the needle moves beyond the centre area mark into the "H" side or hot area of the gauge (indicating high temperature), the engine should be stopped and allowed to cool down before attempting to locate the cause of the problem. (Refer Page 41 for overheating instructions.) Check that no visible leaks are apparent from the cooling system or that the fan belt is not slipping or broken.

CLOCK

The clock is electrically energised and to fulfill its function, operates at all times. The time setting is adjusted by pulling out the knob, situated below the clock face, to engage and rotate the dial hands.



INDICATOR LIGHTS

GENERATOR

The red light will glow when the ignition switch is turned to the ON position. After the engine has been started, the light will go out and remain out. If the light should glow after the engine is running, the fault causing the problem should be located and corrective action taken.

OIL PRESSURE

The red light will glow when the ignition switch is turned to the ON position. After the engine has been started, the light will go out and remain out. If the light should glow after the engine is running above idle, stop the engine and the reason for the loss of oil pressure should be located and corrective action taken.

BRAKE WARNING

When the parking brake is applied with the ignition switch in the ON position, the light will glow until the parking brake is released.

If the indicator light glows and the parking brake is fully released, it would indicate that there may be something wrong with the hydraulic braking system. Immediately the indicator light glows, under these conditions, stop on the side of the road as carefully as possible. Do not proceed until satisfied that cautious progress is possible or that the cause of the problem has been located and rectified.

(Reference should be made to brake operation on Pages 25 and 26.)

HIGH BEAM

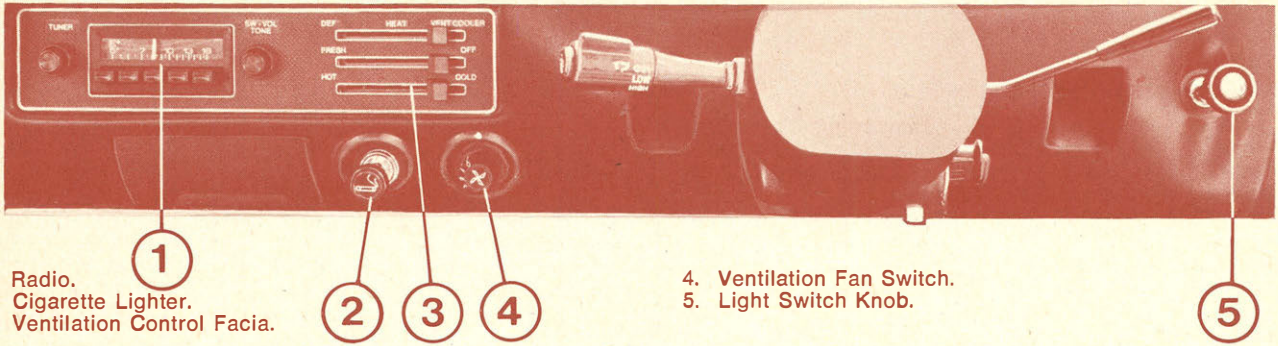
When the headlamps are on high beam a light located between the clock and the speedometer will glow.

TURN SIGNAL

There are two arrow-head turn signal indicators located on each side of the speedometer dial face.

The turn signal indicator light flashes, when the turn signal switch or hazard warning flasher switch is operated.

INSTRUMENT PANEL CONTROLS



1. Radio.
2. Cigarette Lighter.
3. Ventilation Control Facia.
4. Ventilation Fan Switch.
5. Light Switch Knob.

LIGHT SWITCH

Headlamps, tail lamps, parking lamps, and instrument lighting are controlled from a single switch located on the driver end of the lower instrument panel.

The various operating positions of the switch control the lamps in the following order:—

FULLY IN

No lighting switched on.

OUT TO FIRST STOP

Parking, Tail, Licence Plate and Instrument Panel Lighting is switched on.

OUT TO SECOND STOP

The headlamps are switched on in addition to parking, tail, licence plate and instrument panel lighting.

ROTARY CONTROL—INSTRUMENT LIGHTING

The brightness of the instrument lighting may be controlled by rotating the Light Switch, the brightness increasing as knob is turned anti-clockwise and decreasing when turned the other way, when the switch is in one of the out positions.

CONSOLE FLOOR SHIFT SELECTOR—AUTOMATIC TRANSMISSION

Where fitted, the internal lighting of the console is controlled with the instrument panel lighting.

HEATER-DEFROSTER CONTROLS OR OPTIONAL AIR CONDITIONING CONTROLS

(Refer Pages 33-35 of the ventilation section for the correct method of operation of these controls.)

HEATED REAR WINDOW SWITCH

Where fitted, this enables the rear window interior surface to be heated by the conducting stripes adhered to the glass. The heating action will disperse any internal fogging or condensation in cold and/or humid conditions.

When switched on a light in the instrument panel will glow as a reminder. As soon as the condensation has cleared the heating should be switched off.

RADIO

Where a radio is fitted, the manufacturer's instructions, relating to the operation of this option are supplied.

CIGARETTE LIGHTER

To operate, simply press in the lighter knob. It will stay in until the element is hot at which time the lighter will automatically pop back to its original position ready for use.

VENTILATION SYSTEM

FLOW THROUGH VENTILATION SYSTEM

The vehicle features a flow-through ventilation system in which fresh air is ducted into the vehicle through the plenum chamber in front of the windshield and enters the passenger compartment via outlet ducts located in and below the instrument panel.

A relief duct is provided to complete the control of the flow-through system and acts as an exhaust outlet to the atmosphere for stale air.

This duct is located behind the louvre on the left hand side (passenger's side) rear roof pillar, above the rear wheel arch.

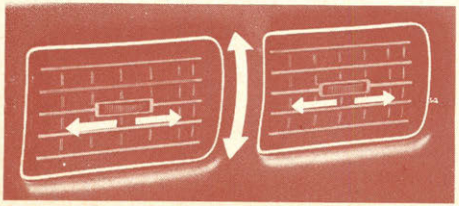
NOTE: Don't allow the plenum inlet grille to be covered or clogged with leaves, snow etc.

INSTRUMENT PANEL VENTS

CENTRE VENTS

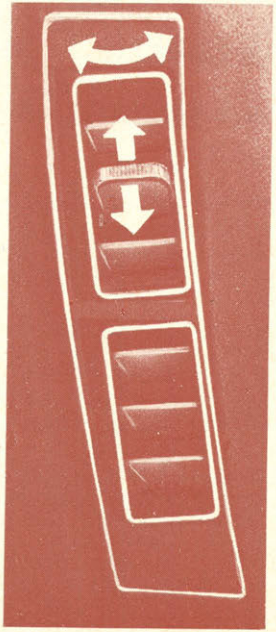
A pair of centre vents are provided on the centre part of the instrument panel. Vertical direction of air flow is controlled by pivoting the entire grille up or down.

The knob at the centre of the grille controls the direction of air flow horizontally.



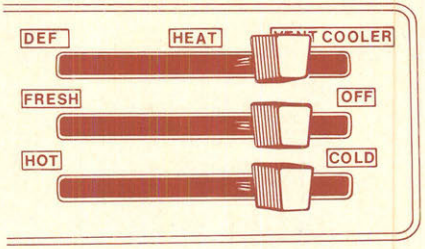
SIDE VENTS

A side vent is provided on each end of the instrument panel. Pivotting the entire grille sidewise controls the direction of air flow horizontally. The knob at the upper centre part of the grille controls the direction of air flow vertically.



OPERATION OF THE CONTROLS

The ventilation control panel is situated in the centre lower area of the instrument panel directly above the cigarette lighter.



DISTRIBUTION CONTROL LEVER (upper lever)

The distribution control lever is used to direct air to the three outlet positions; the windshield defrosting ducts; the instrument panel vents; and the control floor outlets and operates as follows.

DEF— With the lever in this position air is directed to the windshield ducts with a small amount of air being directed to the central floor outlets.

HEAT— With the lever in this position the windshield ducts and central floor outlets receive an amount of air.

VENT— When the lever is moved to this position a bi-level effect is achieved whereby cold ambient air is discharged through the instrument panel vents and warm air, as selected by temperature lever, is directed to the central floor outlets.
For best effect central lever should be on FRESH.

COOLER—This position directs all air to the instrument panel vents.

AIR SOURCE LEVER (middle lever)

The air source lever has two positions, FRESH and OFF and operates as follows.

FRESH— With the lever in this position outside air is drawn into the system, the amount of air being affected by vehicle speed.

OFF— When the lever is moved to this position inside air is recirculated through the system.

TEMPERATURE CONTROL LEVER (lower lever)

The temperature control lever controls a water valve in the engine compartment to vary the temperature of the incoming air.

HOT— When the lever is moved in this position maximum heating of incoming air is obtained.

COLD— With the lever in this position incoming air is not heated and remains at ambient air temperature.

Movement of the lever between the HOT and COLD positions will provide a range of air temperatures as desired.

FAN SWITCH

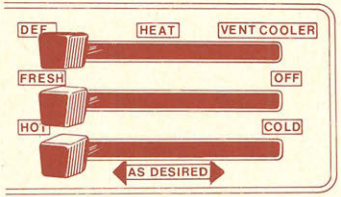
The fan switch is located on the instrument panel under the ventilation control panel. The fan switch has four positions 0, 1, 2, 3, for controlling fan speed in three steps, low, medium and high, thereby controlling the volume of incoming air.

If the fan switch is in the 'O' position and the distribution control lever is moved to the VENT or COOLER position the fan is automatically switched to low speed.
Use the fan to boost air flow whenever it is considered necessary.

OPERATION OF THE SYSTEM

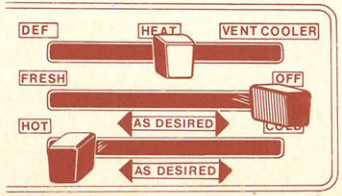
WINDSHIELD DEFROSTING

To defrost the windshield set the distribution control lever at DEF and the air source lever at FRESH. The temperature control lever can be set between HOT and COLD as desired depending on prevailing conditions. The fan speed should also be selected according to the prevailing conditions.



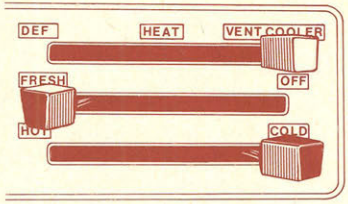
HEATING

Set the distribution control lever to HEAT, the air source lever to OFF or FRESH and adjust the temperature control lever between HOT and COLD as desired to control the temperature of the incoming air. Also select the fan speed as required.



VENTILATING

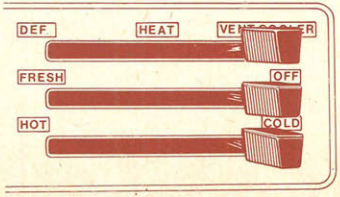
To operate the ventilation system move the distribution control lever to COOLER, the air source lever to FRESH and set the temperature control lever to COLD. The fan will automatically operate at low speed drawing fresh outside air through the instrument panel vents. The air flow can be boosted, if desired, by selecting a higher fan speed.



AIR CONDITIONING (Optional)

To operate the air conditioner set the distribution control lever to COOLER, the air source lever to OFF, the temperature control lever to COLD and select position 1 on the Fan Switch. The air flow through the instrument panel vents can be boosted, if desired, by selecting a high fan speed.

NOTE: The air source lever must be in the OFF position as the system will not operate if the lever is in the FRESH position.



SECTION – 3 IN CASE OF EMERGENCY

EMERGENCY STARTING

CAUTION: Never tow a manual transmission-equipped vehicle to start, because the surge forward when the engine starts could cause a collision with the towing vehicle.

PUSH STARTING

MANUAL TRANSMISSIONS

Should it ever be necessary to start the engine by pushing the vehicle:

1. Place the gear shift lever in NEUTRAL (N).
2. Check the choke or accelerator pedal setting as they apply to the Starting Procedure (p. 20).
3. Turn the ignition switch to ON.

When the vehicle reaches approx. 15 km/h (10 m.p.h.).

4. Depress the clutch.
5. Select high gear (i.e. 3rd in 3 speed or 4th in 4 speed).
6. Slowly allow the clutch pedal to come up.

When the engine starts—

7. Drive away from the pushing vehicle.
8. Stop your vehicle at the side of the road.
9. Allow the engine operation to normalise before proceeding.

Bumpers and other parts contacted by the pushing vehicle should be protected from damage during pushing.

AUTOMATIC TRANSMISSIONS

If for any reason the starter motor is inoperative, it is **not possible** with an automatic transmission to select a range for starting the engine by pushing the vehicle.
If the fault is a flat battery, the engine can be started with the aid of a booster battery. (Refer Jump Starting.)

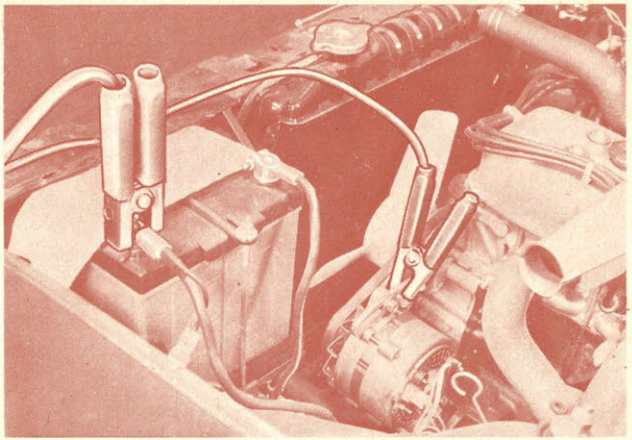
JUMP STARTING (USING A BOOSTER BATTERY)

The following procedure is for use **only** under the following conditions. Departures from these conditions and procedures, could result in: (1) serious personal injury (particularly to eyes) or property damage from such things as battery explosion, battery acid or electrical burns, or (2) damage to electronic components in either vehicle. If all the conditions cannot be met, or if you are uncertain about them, we strongly recommend for your safety and that of your vehicle that you leave the starting to a competent mechanic.
The battery in the other vehicle (booster battery) must be of the **same nominal voltage,** 12 volts, and must be negatively grounded. The nominal voltage and grounding of the other vehicle's battery may be determined by checking the specifications in its owner's manual.Use of a booster battery of a higher nominal voltage, or which is positively grounded may result in serious personal injury or property damage.
CAUTION: Never expose a battery to open flame or electric spark — battery action generates hydrogen gas which is flammable and explosive. Don't allow battery fluid to contact eyes, skin, fabrics, or painted surfaces. The fluid is a sulphuric acid solution which could cause serious personal injury or property damage. Flush any contacted area immediately with water. Wear eye protection such as industrial safety spectacles or goggles when working on or near battery. Remove rings, metal watch bands and other metal jewellery before jump starting or working around a battery. Be careful in using metal tools and equipment. If such metal should contact the positive battery terminal (or metal in contact with it) and any other metal on the vehicle a short circuit may occur which could cause personal injury. Batteries and battery acid should always be kept out of reach of children.

TO JUMP START:

1. Position the two vehicles so they are **not** touching and set the parking brakes. Place the automatic transmission in PARK **(NEUTRAL for manual transmission)** in each vehicle. Also turn off lights, heater and all other unnecessary electrical loads.
2. Remove vent caps* (or covers) from both the booster and the discharged batteries. Lay a cloth over the open vent wells of each battery. These two actions help reduce the explosion hazard always present in either battery when connecting live booster batteries to dead batteries.
3. Attach one end of one jumper cable to the positive terminal of the **booster battery** (identified by a red color, + or P on the battery case, post or clamp) and the other end of the same cable to the positive terminal of the **discharged battery.**
4. Attach one end of the remaining negative cable to the negative terminal (black color, — or N) of the **booster battery,** and the other end to the generator mounting bracket of your vehicle (refer illustration opposite) **(do not connect directly to negative post of dead battery)** taking care that the clamps from one cable do not inadvertently touch the clamps on the other cable. Do not lean over the battery when making this connection.
5. Start the engine in the vehicle that is providing the jump start (if it was not running). Let it run a few minutes, then start the engine in the vehicle with the discharged battery.
6. Reverse the above sequence exactly when removing the jumper cables. Reinstall the vent caps and dispose in a safe manner, any cloths used to cover the vent wells (or covers), as the cloths may have corrosive acid on them.

*Some batteries do not have vent caps.



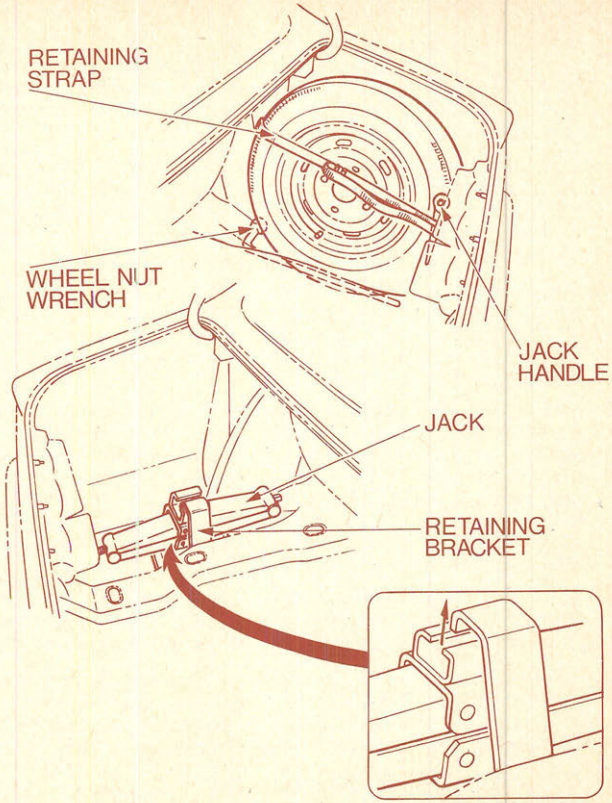
SPARE WHEEL STOWAGE

TO REMOVE

1. Remove the jack handle which is secured between the tyre and retaining strap.
2. Release the retaining strap.
3. Remove the spare wheel and wheel nut wrench.
4. Using the jack handle, lower the jack until it is clear of the retaining bracket, then remove the jack.

TO REPLACE

1. With the jack in the fully down position, place it under the bracket as shown in the illustration and raise the jack, using the jack handle, until it is held securely.
2. Locate the wheel nut wrench as shown in the illustration.
3. Install the spare wheel, fit and tighten the retaining strap until a secure installation is obtained.
4. Locate the jack handle between the tyre and the retaining strap. (Refer illustration).



WHEEL TRIM REMOVAL

HUB CAPS

TO REMOVE

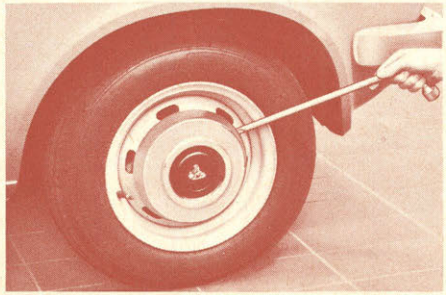
Insert the blade end of the wheel nut wrench behind the hub cap at a position opposite the valve then pry the cap off by twisting the wrench towards the tyre.

TO REPLACE

Position the cap with its rim behind the locating nib nearest the valve and at the position opposite knock the cap on with a light blow using the palm of the hand.

After this has been done ensure that the cap has been completely seated all round on each of the four locating nibs.

CAUTION: It may be necessary to protect the hand during this operation.



WHEEL COVERS

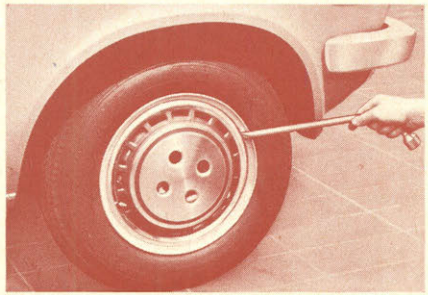
TO REMOVE

Insert the blade end of the wheel nut wrench between the outer edge of the wheel cover and the wheel. With light blows using the palm of the hand and directed towards the wheel hub, force the wrench inwards for half the length of the blade (wedge) section. Then at several points around the wheel lightly pry the cover off by twistlng and moving the wrench away from the tyre, using the wheel as a levering point.

TO REPLACE

Position the cover so that the valve hole in the cover is directly over the valve. While pressing the cover firmly against the wheel at a position below the valve, knock the cover onto the wheel with several light blows, using the palm of the hand and directed towards the wheel hub. Repeat this operation at several positions around the edge of the cover until a secure installation is obtained.

CAUTION: It may be necessary to protect the hand during this operation.



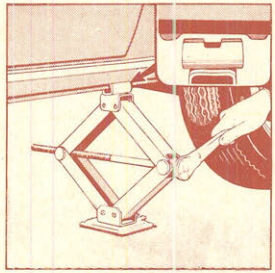
WHEEL CHANGING

CAUTIONS:

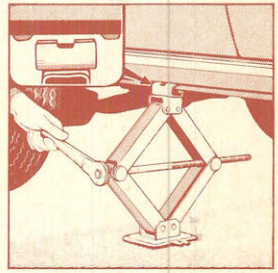
1. **Carefully follow jacking instructions in order to reduce the possibility of serious personal injury.**
2. **The jack is designed for use ONLY when changing wheels.**
3. **Never get beneath the vehicle when supported by the jack only.**
4. **Do not start or run the engine while the vehicle is on the jack only.**
5. **While the vehicle is on the jack excessive passenger movement or releasing of the parking brake could cause the vehicle to move off its jacked position. Therefore, wherever practicable it is best to disembark the passengers during the jacking operation.**

INSTRUCTIONS

1. Park on the most level surface available and set the parking brake firmly.
2. Set the transmission shift lever in Reverse for manual transmissions and in Park for automatic transmissions.
3. Remove the tools and spare wheel (Refer previous instructions).
4. Block the wheel diagonally opposite the jacking position.
5. Remove the wheel trim (refer previous instructions). Using the wheel nut wrench slightly loosen the wheel nuts but do not remove them.
6. Position the jack under the vehicle according to the illustration opposite.
7. Operate the jack by using the ratchet handle to raise the vehicle so that the tyre just clears the ground.
8. Remove the wheel nuts and avoid losing them or getting dirt in the threads. Remove the wheel and change it over with the spare.
9. Tighten the wheel nuts finger tight and then partially tighten using the wrench.
10. By reversing the ratchet handle lower the vehicle until the wheel touches the ground and is held from rotating. Fully tighten the wheel nuts using the sequence illustrated. A load of approximately 55 lbs. on the end of the wheel nut wrench is adequate.
11. Completely lower the vehicle and remove the jack.
12. Replace the wheel trim and stow the tools and changed wheel according to the previous instructions.



Front Jacking Position



Rear Jacking Position

Wheel Nut Tightening Sequence

CAUTION: As soon as practicable, after a wheel change, the wheel nut torques should be checked at a GMH Dealership, or by a competent person, to ensure correct tightness. (Refer Page 68 for wheel nut torque specifications.)

OVERHEATING

If, while the engine is operating, the temperature gauge needle moves abnormally towards the 'H' area, particularly during high load pulling, bring the vehicle to a stop at the side of the road and allow the engine to idle for approximately 2 minutes only, to cool down, after which it should be turned off and the engine hood left open.
While the engine is cooling check whether the fan belt is slipping or broken and check all radiator hoses for leakage and damage.
When the engine is cool check the radiator coolant level according to the following instructions.

CAUTION: DO NOT remove the radiator cap while the engine is still hot because the cooling system will blow out scalding fluid and steam under pressure which is likely to cause serious personal injury and loss of coolant. Therefore, the coolant level should be checked only when the engine has cooled down.

TO REMOVE THE CAP WHEN THE ENGINE IS COOL:

1. Slowly rotate cap counterclockwise to detent. Do not press down while rotating.
2. Wait until any residual pressure is relieved — as indicated by a hissing sound.
3. After any hissing ceases, press down on the cap while continuing to rotate counterclockwise. Remove the cap, check the coolant level, and add water if necessary.

IMPORTANT: Never pour cold water into the radiator when the coolant is extremely low and the engine hot. Wait until the engine has cooled down, then run the engine at idle speed while slowly adding water.
If anything is found to be faulty **do not** run the engine until the cooling system has been checked and the fault rectified by the nearest Service Station, or preferably a GMH Dealer.

If no fault is found, switch the ignition to the ON position and if the needle does not move into the 'H' area of gauge it indicates that the engine has cooled sufficiently to proceed carefully. Start the engine and continue driving, keeping a constant watch on the temperature gauge.
If the overheating condition occurs again stop the vehicle according to the previous instructions and arrange for a GMH Dealer or Service Station to check the cooling system. However if there is no indication that the overheating condition will occur again it is safe to proceed but it is recommended that the cooling system be thoroughly checked by a GMH Dealer at the first convenient opportunity.

NOTE: Radiator pressure caps should be checked annually by your Servicing Dealer for proper operation and replaced as required with the applicable type.

FREEING THE VEHICLE FROM SAND ETC.

If it becomes necessary to rock the vehicle to free it from sand, mud or snow follow the appropriate instructions below.

MANUAL TRANSMISSION

On manual transmission models, move the gear shift lever from second to reverse gear in a repeat pattern while applying light pressure to the accelerator but only when fully engaged in either gear. Do not race the engine.

AUTOMATIC TRANSMISSION

On automatic transmission models move the selector lever from D to R in a repeat pattern while simultaneously applying light pressure to the accelerator.

NOTE: For best possible traction avoid spinning the wheels when trying to free the vehicle.

TOWING A DISABLED VEHICLE

CAUTION: If proper precautions are not taken the towing of a vehicle can be a hazardous operation. It is preferable under all circumstances to have the towing performed by an experienced tow truck operator with equipment which is specially designed for the purpose.

All state laws concerning towing must be followed.
When towing a vehicle follow the towing equipment manufacturer's instructions. Use of a safety chain which is completely independent of the main towing attachment is essential for tow truck operation and strongly recommended when the vehicle is towed using a tow rope. When towing with the rear wheels on the ground the transmission should be in NEUTRAL and the parking brake released.

Vehicles with defective transmissions should not be towed unless the propeller shaft is removed. Vehicles equipped with automatic transmissions must not be towed at speeds in excess of 55 km/h (35 mph) or distances in excess of 55 kilometres (35 miles) unless the propeller shaft is removed.

CAUTIONS:

1. **Never have the vehicle towed on four wheels with the ignition switch in the LOCK or ACC position.**
2. **Where power assisted brakes are fitted never have a vehicle towed on four wheels without a solid connection between the disabled vehicle and the towing vehicle, unless the engine is running.**
3. **Never tow a vehicle at speeds over 80 km/h (50 mph).**
4. **Any loose or protruding parts of the damaged vehicle such as doors, hood, fenders, trims, etc. should be secured prior to moving the vehicle.**
5. **Attachments must be made to main structural members of the vehicle. Do not attach lifting hooks or chains to the bumper bars or bumper bar brackets.**
6. **Points of attachment of the disabled vehicle should be inspected for damage or deterioration. If an attachment point appears damaged or deteriorated another point at a substantial structural member should be selected.**
7. **Never allow any passengers to ride in a towed vehicle.**

SECTION – 4 APPEARANCE CARE

GM QUALITY CAR CARE PRODUCTS

GM Quality Car Care Products available through an authorized GMH Dealer for vehicle cleaning operations include—

- GM POLISHING CREAM
- GM DEGREASER
- GM WASH & WAX
- GM POLISHING LIQUID
- GM TYRE BLACK
- GM UPHOLSTERY CLEANER & DEODORANT
- GM MAN-MADE CHAMOIS
- OPTIKLEEN

PAINT AND APPEARANCE ITEMS

Imperfections in paint, trim or other appearance items would normally be apparent and corrected during New Vehicle Pre-delivery conditioning. Therefore, we suggest that if you find any paint or appearance imperfections, call it to the attention of your Dealer without undue delay as normal deterioration due to use and exposure is not covered by the New Vehicle Warranty.

VEHICLE CLEANING

A job always becomes easier when it is tackled in a systematic way, and vehicle cleaning is no exception. We suggest that if you set about the task of washing and polishing your vehicle in the following sequence the best results will be achieved:—

1. Brush out and clean the interior.
2. Carry out preliminary steps to washing.
3. Wash the exterior.
4. Polish the exterior and finish off.

Ask your GMH Dealer for the recommended range of GM Quality Car Care Products.

CAUTION: Many cleaners may be toxic or flammable, or may cause damage to the interior. When cleaning the interior, do not use volatile cleaning solvents such as: acetone, lacquer thinners, enamel reducers, nail polish removers; or such cleaning materials as laundry soaps, bleaches or reducing agents. Never use carbon tetrachloride, gasoline or naphtha for any cleaning purpose.

IMPORTANT: Be sure the vehicle is well ventilated while using any cleaning agents. Follow the manufacturer's recommendations when using such products.

CLEANING OF INTERIOR

CARE AND CLEANING OF UPHOLSTERY

Dust and dirt particles which accumulate on the surface of the interior trim should be removed every few weeks — more often with constant hard driving. This can be done readily with a vacuum cleaner. Before attempting to remove spots and stains from an upholstery fabric, it is necessary to determine as accurately as possible:

1. The type of fabric,
2. The nature and age of the stain,
3. The effect of the stain removal agent upon the colour, structure and general appearance of the trim material.

It is essential that stains be removed from the trim material as soon as possible after they have been made. If they are allowed to remain on the fabric for any length of time they very often become oxidised or set, and removal becomes difficult, if not impossible.

CLEANING P.V.C. COATED FABRICS

Vinyl (P.V.C.) coated fabrics are used for seating, headlining and auxiliary trimming. The grades used vary according to their function. P.V.C. fabrics are generally made with fabric bases upon which synthetic resins are applied. Care of P.V.C. fabrics is a relatively simple but important matter. The surface should be wiped over with a dry cloth during the regular cleaning of the vehicle. Should dirt accumulate and become embedded in the material pattern the following procedure is recommended:

1. Using lukewarm water and soap, work up thick suds on a piece of cheesecloth, and apply to the surface. A soft bristled brush can be used to advantage to remove stubborn stains or dirt embedded in the grain of the material.

2. The operation should be repeated using only a damp cloth and no soap.
3. The trim should then be wiped dry with a soft cloth.

The above cleaning instructions also apply to the rubber floor mats.

IMPORTANT: Where stubborn stains on P.V.C. fail to respond to the above methods, a light application of GM Upholstery Cleaner and Deodorant (Part Number M37222) with a soft cloth will normally prove satisfactory.

Do not use cleaner excessively.

CLEANING CLOTH TRIM MATERIAL

Where the seats in your vehicle are upholstered with cloth trim the following instructions should be observed.

Most loose dirt and dust can be removed by a vacuum cleaner or a soft brush. **Do Not Use a Whisk Broom or a Coarse Hair Brush.** If normal soiling should take place, it is recommended that the fabric be sponged lightly with warm water containing a detergent and a small amount of ammonia. The fabric should then be rubbed lightly, and if necessary, sponged again to remove anything stubborn. Soak up excess fluid with dry cloth. GM Upholstery Cleaner may be used to advantage, but should be used sparingly.

CLEANING CARPETS

Thoroughly brush or vacuum the carpet. In many instances the carpet may require no further cleaning. If the carpet is extremely soiled, thoroughly vacuum it to remove loose dirt; then using GM Car Care Upholstery Cleaner, clean approximately one square foot at a time. After each area is cleaned, remove as much of the cleaner as possible with a vacuum cleaner. After cleaning the carpet, use an air hose to fluff the carpet pile, then dry the carpet. After the carpet is completely dried, use an air hose to again fluff the carpet pile.

CLEANING SEAT BELTS

Cleaning of the seat belts can be carried out by using a mild non-abrasive soap and lukewarm water. After washing be sure to thoroughly sponge the washing solution out of the belts.

CAUTION: Do not bleach or dye belts since this may severely weaken belts.

CLEANING ASH TRAYS

DRAWER TYPE (Front Seat)

To remove slide out the tray, depress the spring loaded tab in the centre and carefully withdraw. The tray can then be emptied and cleaned. To replace reverse this procedure.

INSERT TYPE (Rear Seat — Coupe Models)

To remove, open the lid of the ash tray and use the lid to pull out the ash tray complete. The tray can then be emptied and cleaned. To replace, reverse the procedure.

SWIVEL (Rear Seat — Sedan Models)

To remove, open ash tray, depress the spring loading tab in centre and carefully withdraw. The tray can then be emptied and cleaned. To replace, locate the small lug on the bottom of the tray in the hole provided, depress the spring loaded tab and then push the tray fully in.

CLEANING OF EXTERIOR

PRELIMINARY STEPS

CAUTION: Care should be used when moving the vehicle after washing, in case water has affected the brakes.

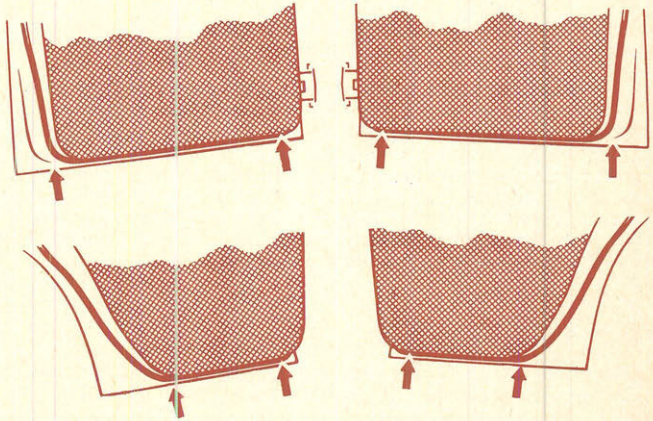
Frequent hosing and washing of the vehicle cannot be overstressed as the most effective precaution against corrosion. Other items requiring attention before washing the vehicle are as follows:—

1. UNDERBODY CLEANING

The effects of salts and other corrosive materials from road surfaces can result in accelerated rusting and deterioration of underbody components such as brake and fuel lines, frame, underbody floor pan, exhaust system, brackets, parking brake cables. These corrosive effects, however, can be reduced by periodic hosing of the underbody with plain water whenever the vehicle is being washed. In geographic areas having a heavy concentration of corrosive materials it is recommended that the complete underbody be inspected and washed at least once each year, preferably after a winter's exposure. Particular attention should be given to cleaning out underbody members where dirt and other foreign materials may have collected.

2. DOOR DRAIN HOLES

It is important that the drain holes located at each bottom end of the door panels are checked to make sure that they are free of dirt and foreign matter, which could trap water inside the panels. Clogged drain holes can be cleaned with a small screwdriver. (Refer illustration below.)

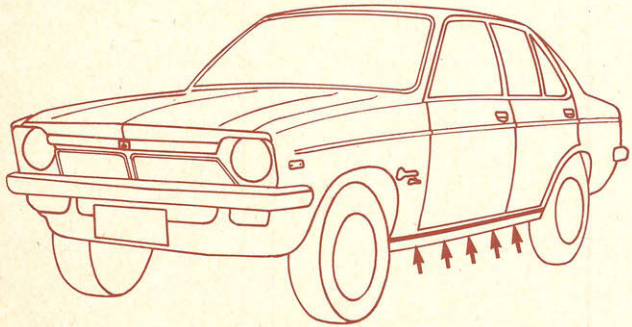


3. ROCKER SILL VENTS

In all model bodies there are vents which should be regularly checked to see that they are clear of blockage, using a blunt ended instrument.

These vents are formed as cut-outs in the sheet metal along the bottom edge of the rocker sill, being evenly placed between the front and rear wheel arches. (Refer illustration below.)

Coupe Rear Quarter Drain Vents. On these vehicles, there are two elongated drain holes below the rear quarter window, in the rocker sill and these should be checked to see that they are clear of blockage.



4. GLASS

Special care should be taken to avoid scratching the glass when it is being cleaned. If it is cleaned at the same time as the rest of the vehicle, there is a possibility that particles of grit will cause fine scratches. An accumulation of these on the windshield can make night driving very unpleasant. Flush off any heavy mud deposits on the glass when washing the body, but leave the final cleaning and polishing until afterwards.

Each section of glass should then be washed in turn, making sure that the water, its container and the sponge are quite clean and free from grit. If the glass is very dirty, a little household ammonia mixed with warm water will help. Clean old linen cloth is better than new material for polishing glass.

INSECT SPOTS

Insect spots on the paint finished parts of the vehicle can be easily washed off by using a solution containing 2 litres (4 pints) of water in which approx. 220 grams (½ pound) of baking soda (Bicarbonate of Soda) has been dissolved. Flush the washed parts with clean water. After washing and drying, park the vehicle in a shaded area.

WASHING

The acrylic lacquer finish on your vehicle is superior to ordinary lacquers and will stay bright and new looking for years with little or no polishing, provided it is given a reasonable amount of regular washing to keep off road grime.
To preserve the original paint finish of the vehicle, it is essential that it is kept clean by frequent washing. Washing not only removes dirt and road grime that settles on the vehicle, but also dilutes acids which accompany such grime, in particular, salt from air or sea spray encountered in coastal areas which often become trapped in crevices. Tree sap, road tar, excretion from insects and industrial fall out often contain harmful chemicals and other foreign matter that may permanently damage the paint finish of the vehicle. These should be removed without delay, using an effective removal agent.

REGULAR WASHING

If the vehicle is in continuous use, it should be washed at least once a week with either cold or warm water (preferably running water), using clean chamois leathers, sponges or rags free from dirt or grit likely to scratch the paint finish. It is good practice to first hose the vehicle to remove as much of the grit and grime as possible before swabbing the surface. Do not wash the vehicle under bright sunlight when high temperatures are being experienced, as this will result in a streaky, watermarked finish.
GM Wash and Wax (Part Number M37226) loosens road grime to make washing easier and leaves paint shining clean.
IMPORTANT: If petrol is spilt on the paint finish when refilling, owners are advised to ensure that it is flushed off with clean water immediately. The reason is that petrols currently in use have a tendency to stain or soften new paint finish during the weathering out period, particularly when the vehicle is exposed to high temperatures.

NOTES:

1. Calcium chloride and other salts, road oil and tar, tree sap, chemicals from factory chimneys and other foreign matter may damage any known automobile finish if allowed to remain in contact with the paint film.

2. Some chemical cleaners used for removing road oils and tars from painted surfaces have been found to be detrimental to acrylic finishes. When purchasing a cleaner, polish or wax, ensure that it can be safely used on an acrylic finish.

3. Grease and oil — and even tar if it's fresh — can be removed from the finish with a little Kerosene or White Spirits. As a precaution against staining, wash and polish as soon as possible the area from which the foreign matter has been removed.

TYRES

Sponging with cold water is all that is necessary for normal cleaning of the tyres. Oil and grease can — and should — be removed with soap and water or detergent. For tar or other substances, a mild abrasive, such as mechanics' hand soap or kitchen cleaning powder, may be used if necessary. Thoroughly wash the tyres with water to finish. Petrol must not be used for cleaning tyres.

New Tyre look can be restored by using GM Tyre Black (Part Number M37227) supplied in easy-to-use applicator.

POLISHING

Even though the acrylic lacquer finish on your vehicle is more durable than ordinary lacquers, under certain conditions you may wish to polish your vehicle to provide maximum protection against road dirt and industrial fall out etc. Also, the application of a polish may be required to remove foreign matter which is not normally removed from vehicles by washing. Over a period of time, such foreign matter may build up on the paint surface to the detriment of its overall appearance.

Do not attempt to apply a polish without first washing to remove existing loose grit, surface dirt, dust or grease, etc. Either GM Polishing Liquid (Part No. M37221) or GM Polishing Cream (Part No. M37220) will quickly and easily impart a deep, rich shine when used as directed on the container.

CHROMIUM PLATED PARTS

Generally, a rub with a clean soft cloth will be all that is necessary to remove dust from the chromium plated parts. However, if the chromium is covered with dead insects or mud, it should be washed with warm soapy water and then cleaned with GM Polishing Liquid (Part Number M37221). This polish should also be used if the chromium shows signs of tarnishing. Do not use ordinary metal polishes as they may contain abrasives which would ruin the plating.

PAINT WORK INSPECTION

Regular inspection of the vehicle should be made for scratch marks, cracks or damaged areas, all of which could develop rust and thus affect paint finish. Any deep scratches, cracks or breakdown in the finish should be repaired without delay. Care should be taken to ensure that any rusting is counteracted immediately, otherwise rust 'creep' will extend beyond the damaged area. This applies particularly in sub-tropical areas or coastal districts, where the moist or salt-laden atmosphere accelerates rusting if it is allowed to develop through neglect. The paint finish of the vehicle gives a very high degree of protection against the weather, but it should be realised that wear and deterioration occur when the vehicle is exposed to elements for prolonged periods.
The vehicle therefore should be garaged whenever possible.

GENUINE GM REPLACEMENT PARTS AND ACCESSORIES

GM Parts & Accessories Division of General Motors-Holden's Pty. Ltd. is established to distribute Genuine GM Parts through Authorized GMH Dealers located throughout the Commonwealth from whom you can obtain new parts as required.

Genuine GM Parts are manufactured to the high standards of quality established for General Motors-Holden's vehicles — to the correct specifications and of the same materials as the original parts on your vehicle. They are, therefore, guaranteed, and it is definitely to your interest to specify them.

SECTION – 5 SERVICE AND MAINTENANCE

ENGINE

CAUTION: As with any machinery, extreme care should be taken when performing any inspection, maintenance, or repairs so as to prevent accidental injury. Improper or incomplete servicing could also result in vehicle operational problems which may lead to serious personal injury, or damage to the vehicle. Should you have any doubts about performing any operation, have it performed by a qualified workshop such as a GMH Dealer.

FUEL REQUIREMENTS

Your vehicle is designed to operate on good quality clean fuels. (Refer to page 84 for octane requirements of your engine.) Fuels to these requirements will give the best and most economical operation of your vehicle.

Use of a fuel which is too low in anti-knock property will result in "pre-ignition" (a metallic rapping noise generated during the combustion process). If pre-ignition persists, consult an authorized GMH Dealer. Continuous or excessive pre-ignition may result in engine damage and constitutes misuse of the engine for which General Motors-Holden's is not responsible under the terms of the Warranty.

INITIAL OIL FILL

A high quality SE oil was installed in your engine at the factory. This factory installed oil should be changed at the 3 month/5000 km Service and then at every 6 months or 10,000 km Service. However, check the oil level more frequently during the running-in period since higher oil consumption is normal until the piston rings become seated.

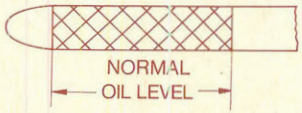
NOTE: Non-detergent and other low quality oils are specifically not recommended. Only the use of SE engine oils and proper oil and filter change intervals assure you of continued proper lubrication of the engine.

MAINTAINING OIL LEVEL

The oil level indicator has a checkered marking which indicates normal oil level. The oil level should be maintained within the checkered marking at all times, neither going above the high level nor under the low level. Check the oil level frequently and add oil when necessary.

To check the oil level accurately, the vehicle must first be on level ground and the engine should be stopped for at least ten minutes. Checking the oil level too soon after stopping the engine will not allow sufficient time for oil, which has circulated to the upper parts of the engine, to drain back into the engine oil pan, and consequently, a false low reading will be obtained. Topping up under these conditions will result in the oil pan being over-filled.

Remove the indicator, wipe it clean with clean cloth or paper before reinserting it firmly. Pause for a second then withdraw the indicator to check the reading of the oil level.



The distance between the high and low levels represents approximately 0.8 litre. (1.4 pints). Oil level should be checked more often during the running-in period since somewhat higher oil consumption could be experienced until piston rings become seated.

OIL CONSUMPTION

In many cases, it is erroneously thought that engines should not use any noticeable amount of oil between oil changes. In actual fact every internal combustion engine should use a certain amount of oil to act as a lubricating and cooling agent, especially during the running-in period.
There are several factors that contribute to oil consumption, apart from mechanical malfunction, that should be noted, and these are: the type of oil, the seating of piston rings, the oil level, and the conditions under which the vehicle is operated.

RUNNING-IN

The initial factory-fill should remain in the engine for the recommended period. (Refer this section.) Oil consumption may be high during the running-in period.

LUBRICATION

An engine is dependent on oil to lubricate the cylinder walls, pistons, rings and valve stems. A film of oil is left on the cylinder walls and burned on the next firing stroke while the film on the valve stems is drawn into the combustion chamber and burned. These quantities, while small, explain why an engine does use some oil.

OIL LEVEL

Maintaining a proper oil level is also an important factor in controlling oil consumption. An overfull crankcase allows the reciprocating parts of an engine to splash oil on to the cylinder walls in quantities greater than the piston rings can control. This excess oil will be drawn into the combustion chambers and burned.

Overfilling the crankcase can result if the oil level indicator markings are not understood. (Refer to previous notes.)

DILUTION

Probably the most prevalent complaint of oil consumption comes from the motorist whose vehicle is driven at below normal operating temperatures for long periods of time. The oil becomes diluted by fuel and moisture which settle in the crankcase, raising the oil level and creating a false reading on the oil level indicator. For example, in a vehicle that has accumulated 1500 kilometres (1,000 miles) of city operation and has consumed a normal amount of oil, the oil level may not have dropped due to dilution. If this vehicle is then driven for some distance at highway speeds on a warm day, the dilution elements evaporate, lowering the oil level and the motorist assumes the oil is being lost.

SPEED CONSUMPTION

Sustained high engine speeds will increase oil consumption because higher speeds increase engine temperatures which lower oil viscosity and allow more oil to reach the combustion chamber.

If it is considered that the above possibilities can be accounted for but excessive oil consumption appears to continue, then it is recommended that you discuss the situation with a GMH Dealer.

NOTE: Non-detergent and other low quality oils are specifically not recommended. The use of break-in oils, tune-up compounds, friction-reducing compounds and other supplemental additives are not recommended; their use will only increase operating costs.

REMINDER: The use of proper engine oils and observing oil change intervals are your best assurance of continued reliability and performance from the engine of your vehicle.

In the event of an operational problem, consult your GMH Dealer for advice before using supplemental additives.

OIL FILTER REPLACEMENT

The full-flow oil filter, with non-return check valve, filters all the engine oil delivered by the oil pump. For this reason the interval of filter change is very important.

The oil filter should be replaced every six months or 10,000 kilometres (6,000 miles) whichever occurs first, independent of oil change intervals.

Under prolonged dusty driving conditions it is recommended that the oil filter be replaced more often.

NOTE: After the oil filter has been replaced, an additional 0.4 litre (0.7 pint) of oil must be added.

OIL CHANGE INTERVALS

(ONLY 'SE' GRADE OIL SHOULD BE USED.)

The engine oil change interval is dependent on the type of operation of the vehicle and on the climatic conditions in which it is operating. The chart given below indicates the change interval recommended for normal operating conditions.

NORMAL OPERATING CONDITIONS

Prevailing Daytime Temperature	Regular Oil Change Interval
ABOVE 10°C (50°F.)	EVERY 180 DAYS OR 10,000 km —WHICHEVER OCCURS FIRST.
BELOW 10°C (50°F.)	EVERY 30 DAYS OR 5000 km —WHICHEVER OCCURS FIRST.

ABNORMAL OPERATING CONDITIONS — EVERY 30 DAYS OR 5000 km

Under prolonged dusty conditions it is recommended that oil changes be made more often than shown in the table. Long runs at high speeds under high ambient temperatures with the resultant high engine operating temperatures, may oxidize the oil, forming sludge and varnish. While no definite drain intervals can be recommended under these conditions, they should be more frequent than under normal driving conditions.

However, owing to present day operating conditions, more vehicles are at the other extreme, that is, they are driven so that they seldom have the opportunity to attain and maintain efficient engine operating temperatures. This applies to city and suburban driving, where short distances are travelled. Under severe conditions such as these, sludge forms in the engine more readily, thus necessitating more frequent oil change intervals.

IT IS RECOMMENDED THAT YOU SEE YOUR GMH DEALER FOR ADVICE ON THE FREQUENCY OF OIL AND FILTER CHANGES UNDER UNUSUAL DRIVING CONDITIONS.

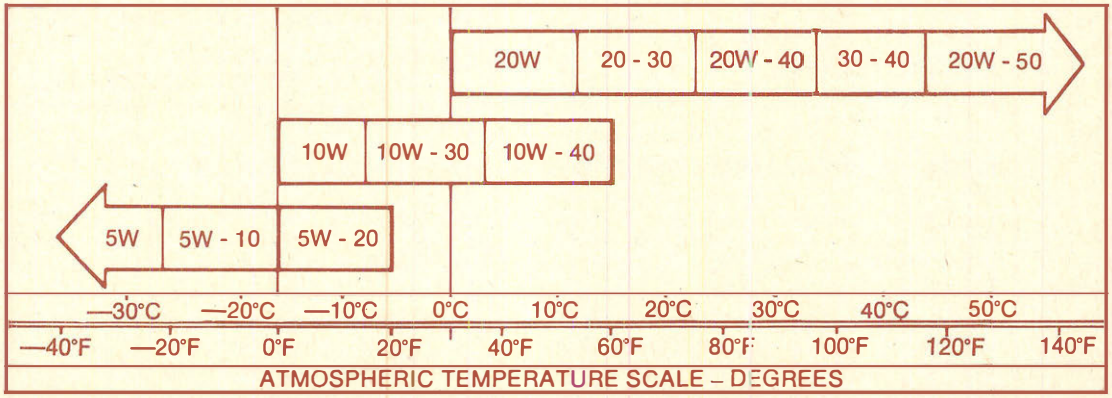
ENGINE OIL VISCOSITY GRADES

(ONLY 'SE' GRADE OIL SHOULD BE USED)

The grade of crankcase oil should be selected to give the best performance under the climatic and driving conditions in the territory in which the vehicle is driven. When the crankcase is drained and refilled, the crankcase oil should be selected, not on the basis of the existing temperature at the time of the change, but on the atmospheric temperature range anticipated for the period during which the oil will be used.

During warm or hot weather, an oil which will provide adequate lubrication under high operating temperatures is required. During the colder months of the year, an oil which will permit easy starting at the lowest atmospheric temperature likely to be encountered, should be used.

The Chart below will serve as a guide in selecting the proper S.A.E. viscosity grade of oil.



NOTE: Use one of the following S.A.E. Grades for sustained high speed driving: 20-30; 20W-40; 30-40; 20W-50.

SEAT BELTS

In the interest of safety seat belts should be checked regularly. Your Dealer will inspect and test the belts for you as part of the normal Guardian Maintenance Service. Never attempt to modify or change the seat belt away from the original specification as this will affect the operation of the belts and reduce their effectiveness, in preventing injury, in an accident.

TRANSMISSIONS

MANUAL TRANSMISSION

Every six months or 10,000 kilometres (6,000 miles) whichever occurs first, check the lubricant level and add oil if necessary to fill the transmission to the level of the filler plug hole (refer to page 60 for recommended oil specification). The oil should be changed at the first 6 months or 10,000 km Service and then at every 24 months or 40,000 km (24,000 mile) Service.

AUTOMATIC TRANSMISSION

FLUID RECOMMENDATION

Use automatic transmission fluids identified with the mark DEXRON®, available from your GMH Dealer.

Check the fluid level at each service. To make an accurate fluid level check:

1. Drive the vehicle several kilometres, making frequent starts and stops, to bring the transmission up to normal operating temperature approximately 80°-90°C (180°-190°F).
2. Park the vehicle on a level surface.
3. Place the selector lever in 'Park' and leave the engine running.
4. Remove the dipstick and wipe it clean.
5. Reinsert the dipstick until the **cap seats.**
6. Remove the dipstick and note the reading.

If the fluid level is at or below the ADD mark, add sufficient fluid to raise the level to the FULL mark. .5 litres (1 pint) raises the level from ADD to FULL. **Do not overfill.**

Under normal driving conditions, the transmission fluid should be changed every 24 months or 40,000 kilometres (24,000 miles). If your vehicle is driven extensively in heavy city traffic during hot weather, or is used to pull a trailer, change the fluid every 12 months or 20,000 kilometres (12,000 miles). Likewise, operators of vehicles in commercial use such as taxicabs, hire vehicles or patrol vehicle services where the engine idles for long periods, should change fluid every 12 months or 20,000 kilometres (12,000 miles).

SERVICING

As all adjustments, cleaning and servicing, of automatic transmissions requires specialised equipment and knowledge it is recommended that these operations be performed by an authorised GMH Dealer.

REAR AXLE

Every six months or 10,000 kilometres (6,000 miles) whichever occurs first, check the lubricant level and add oil if necessary to fill the rear axle to the level of the filler plug hole (refer to page 60 for recommended oil specification).

COOLING SYSTEM

The function of the cooling system is to keep the engine at its most efficient operating temperature under all driving conditions. Therefore care and proper servicing of the cooling system is essential to maintain its maximum efficiency.

IMPORTANT—CORROSION PROTECTION

For maximum corrosion protection of the cooling system it is essential that water of a high purity be used in conjunction with an approved corrosion inhibitor.

In many areas of Australia, particularly in areas of low rainfall where water with high mineral or chemical content is common, rain water or distilled water must be used for top-up and complete fill purposes.

RADIATOR PRESSURE CAP

With the radiator pressure cap fitted, the cooling system can function at a temperature in excess of 100°C (212°F) without boiling.

CAUTION: Therefore, if the cooling system is hot, the radiator cap must not be removed quickly — it should be rotated slowly to the first stop, which permits the pressure to release slowly through the overflow pipe. The cap must not be removed completely until all the pressure is released, consequently, it is advisable to cover the cap with a cloth as protection against steam. Unless this precauton is taken the coolant may boil when pressure is released and some of it be ejected from the filler neck of the radiator, causing injury to persons or damage to the vehicle finish.

Never pour cold water into the radiator when coolant is extremely low and the engine is hot. Such a sudden change in temperature may result in cracking the water jackets. It is advisable to allow the hot engine to cool for 10 to 15 minutes, then run the engine at idle speed while slowly adding water.

THERMOSTAT

The cooling system is protected and controlled by a thermostat installed in the engine coolant outlet to maintain a satisfactory operating temperature of the engine. This thermostat is designed for continuous use through both winter and summer and need not be changed seasonally.

FILLING THE COOLING SYSTEM

Running an engine with the coolant level low enough to cause boiling will result in engine damage. The coolant level should be checked when the engine is cold and then only enough water should be added to bring the level to approximately 2 cm (1 in.) below the bottom of the filler neck. This procedure must be followed as excess water containing inhibitor will be expelled during the warm-up period, due to expansion, which will deplete the concentration of inhibitor and thus promote corrosion.

DRAINING AND FLUSHING

Every 6 months or 10,000 kilometres (6,000 miles) drain the cooling system and add inhibitor. (Refer Page 57.)

To completely drain the cooling system, carry out the following steps:

RADIATOR

Loosen the cap. Unscrew the drain plug located at the right hand side (driver's side) lower edge of the radiator.

ENGINE

Unscrew the drain plug located on the left hand side (passenger's side) of the engine block adjacent to the front of the engine mounting bracket.

REMINDER: Replace and properly tighten all drain plugs before refilling.

Do not use cleaning chemicals to loosen scale unless the cooling system is afterwards thoroughly reverse flushed, otherwise loosened scale will clog the radiator water passages.
For complete removal of loose sediment and sludge from the radiator and water jacket, pressure flushing with an air and water gun is recommended, and as this method of flushing requires special equipment we suggest you have this work carried out by your GMH Dealer.

CAUTION: The radiator coolant contains a rust inhibitor or an antifreeze, both of which are toxic. Should an emergency arise where drinking water is required, the radiator coolant must not be consumed under any circumstances.

NOTE: In addition, care should be taken to prevent the fluid coming in contact with clothing or the exterior finish of the vehicle as it could cause a stain. If any fluid is splashed on the finish, flush immediately with clear water.

CORROSION INHIBITOR

HN-1109 (PART No. 2822485)

It is recommended that 120 ml (4 fluid ozs.) of corrosion inhibitor HN-1109 be added after regular draining.
The amount of inhibitor specified is sufficient when used in water which is fit for human consumption.
Where other water, such as borewater, has been used in an emergency, immediately it is possible, drain and flush the cooling system and refill using clean water and the recommended quantity of corrosion inhibitor.
Ensure that the correct mixing instructions are observed when adding the corrosion inhibitor.

MIXING INSTRUCTIONS

The recommended quantity should be added to a bucketful of water and stirred before pouring the water into the radiator. Then complete the filling of the cooling system with water. It is not recommended that water be added to a container, into which the inhibitor has first been poured.

COLOUR INDICATIONS

Initially, the inhibitor will cause a pale transparent green coloration to the water. After some time the coloration may change to greenish-yellow. In either case, these colours indicate that the cooling system is being protected.

NEW RADIATOR PROCEDURE

Where a new radiator is fitted, the inhibitor used for the first 6 months or 10,000 kilometres (6,000 miles) should be J.1 (Part No. 7426874), then after draining the normal inhibitor HN-1109 (Part No. 2822485) should be used.
NOTE: If J.1 is not available for the initial period, HN-1109 is satisfactory.

USE OF ANTI-FREEZE FLUID

The recommended anti-freeze fluid is permanent type (ethylene glycol) GM 1899M, which can be obtained through a GMH Dealer who, before adding, should make a thorough check of the cooling system.

NOTE: Anti-freeze provides the action of a corrosion inhibitor, eliminating the necessity for a separate additive.
Where a vehicle is to be parked overnight or operated for any length of time in regions where temperatures of 0°C (32°F) or below are encountered (e.g.—snow areas), the recommended brand of anti-freeze fluid should be used in accordance with the instructions specified.

COLD WEATHER DRAINING

If the recommended brand of anti-freeze fluid is not available, the radiator, and cylinder case, MUST be drained before parking to prevent the possible bursting of the radiator, or cracking of the cylinder block which can occur if the coolant freezes.

CAUTION: Draining of the main radiator and cylinder case assembly will not drain the water out of the heater radiator; therefore, the use of Anti-Freeze will eliminate the risk of a damged heater core.

BATTERY (12 Volt)

The battery is located in a metal cradle mounted on the left hand fender skirt in the engine compartment and the negative (—) terminal is "grounded". Never disconnect the battery or generator when the engine is running. Always connect Positive (+) to Positive (+), Negative (—) to Negative (—) whenever a battery charger is used.

FLUID LEVEL

The battery fluid level should be maintained at 1 cm (½ inch) above the plates by adding distilled water. Distilled water will be required more frequently in summer than in winter. It is a good plan to check the fluid level at least once a week in summer and every two weeks in winter. When long daylight runs are made, water must be added still more frequently. Keep all battery terminals clean and tight.

CAUTION: Never expose a battery to open flame or electric spark — battery action generates hydrogen gas which is flammable and explosive. Don't allow battery fluid to contact skin, eyes, fabrics, or painted surfaces — battery fluid is a sulphuric acid solution which could cause serious personal injury or property damage. Flush any contacted area immediately with water. Wear eye protection such as industrial safety spectacles or goggles when working on or near a battery. Remove rings, metal watchbands and other metal jewellery before jump starting or working around a battery, and be careful in using metal tools — if such metal should contact the positive battery terminal (or metal in contact with it) and any other metal on the vehicle, a short circuit may occur which could cause personal injury. Batteries and battery acid should always be kept out of the reach of children.

BRAKE MASTER CYLINDER

Every 6 months or 10,000 kilometres check the fluid level in the master cylinder. The fluid level should be maintained at the LEVEL mark on the top area of the cylinder wall. If the master cylinder requires constant topping up it could indicate that a malfunction exists in which case it should be immediately brought to the attention of your servicing GMH Dealer.

AIR CLEANER

The air cleaner should be removed and cleaned every 6 months or 10,000 km and replaced every 24 months or 40,000 km. If the vehicle is operating in extremely dusty conditions for any length of time the air cleaner should be cleaned more frequently.

CAUTION: Do not remove the engine air cleaner unless temporary removal is necessary during repair or maintenance of the vehicle. When the air cleaner is removed backfiring can cause fire in the engine compartment.

EVAPORATIVE CONTROL SYSTEM

Every 24 months or 40,000 kilometres (24,000 miles) check all fuel and vapour lines and hoses for proper connections and correct routing as well as condition. Replace damaged or deteriorated parts as necessary.

WINDSHIELD NOTES

WINDSHIELD CLEANLINESS

It is imperative, at all times, that the windshield surface be maintained in a clean condition so that the wiper blades may be as effective as possible in wiping clean the surface. Use of the windshield washer and Optikleen washer solvent will assist in removing dirt and dust particularly when driving at a time when no rain is falling; however, every opportunity should be taken to wipe or wash the windshield by hand (most Service Stations have such a service today as a courtesy item). Abrasive materials must never be used to remove a build-up of road scum, etc., as a scratched windshield will cause difficulty in achieving proper vision, particularly in night driving. Therefore, after the windshield has been cleaned with a wet sponge etc., it should be wiped dry with a soft, lint free cloth or even a ball of newspaper.

WINDSHIELD WIPER BLADES — CLEANING

Much of the oily road scum thrown up onto the windshield glass, causing smearing when the wiper is switched on, transfers onto the wiper blade. Many owners, whilst they methodically clean the windshield glass, omit to clean the wiper blades and consequently smearing of the glass reappears immediately the wiper blades are set in motion.
The blades can be cleaned by simply lifting them off the windshield glass and then using warm water and a recognised washing fluid. If so desired, the wiper blade can be removed from the arm for cleaning purposes by simply disengaging it from the arm in accordance with the following instructions:—

1. Lift the wiper arm and blade off the windshield glass with one hand.
2. While holding the wiper arm in one hand relieve the pressure on the retaining clip, located in the centre of the blade. This will enable you to remove the blade from the arm.
3. To replace the blade reverse the above procedure ensuring that the retaining clip snaps home.

WINDSHIELD WASHER RESERVOIR

A plastic reservoir containing liquid for the windshield washer is mounted in the engine compartment. It is suggested that when checking the radiator coolant level, the washer reservoir be checked also. For a crystal clear view Optikleen Washer Solvent (Part Number M37068) can be used by adding from the graduated container, the recommended proportion.

CAUTION: Do not operate the wiper blades by hand as this may damage the wiper drive mechanism.

In dry conditions, if the wiper blades are used to clean dust and dirt from the windshield always use the washer system to wet the windshield. Ensure that the windshield washer reservoir is checked regularly all the year round.

Should the wiper blades be frozen to the windshield, it is imperative that they be lifted off and freed by hand before switching on the windshield wiper system.

LUBRICANTS AND FILTERS

CHASSIS

ENGINE OIL
(Refer Page 70 for grades and application.)

MANUAL TRANSMISSION OIL
Duo grade 30/40 engine oil of SC, SD or SE quality.

AUTOMATIC TRANSMISSION FLUID

*DEXRON automatic transmission fluid only, identified also by Part No. 9985158 should be used for topping up or service refills.
*DEXRON is a registered trademark of General Motors.

REAR AXLE OIL
Use Multipurpose Hypoid gear oil in this order of preference, HN 1386 or HN 1187 or HN 1181 specification

FRONT WHEEL BEARINGS
Grease to HN 1228 specification.

BRAKE FLUID
Fluid to GM 4653M Type 450 specification.

CONTROL SYSTEMS
Brake and Clutch Pedal Pivots, Clutch Linkage, Transmission Control Linkage, Accelerator Pivots, Parking Brake System, Pivot and Guides. Grease to HN1225 (LG-2) specification.

ENGINE AIR CLEANER ELEMENT
Part Number 94203536.

ENGINE OIL FILTER ELEMENT
Part Number 94201942.

FUEL FILTER
Part Number 94207910.

BODY

Normal use of a vehicle causes metal-to-metal movement at certain points in the body. Noise, wear and improper operation at these points will result when a protective film of lubricant is not provided. Servicing and lubrication of the undermentioned points should be an integral part of the lubrication service and should be checked out as required every 6 months or 10,000 kilometres.

POWDERED GRAPHITE
(Apply through key aperture)
Door Lock Cylinder
Instrument Panel Compartment Lock Cylinder
Rear Compartment Lid Lock Cylinder

NON-STAINING GREASE OR ZINC OXIDE GREASE
(Use sparingly on parts likely to be contacted by clothing)
Engine Hood Catch and Lock
Rear Compartment Hinges
Engine Hood and Door Hinges

SOLIDOIL
(Use sparingly on working surfaces)
Door Lock Fork
Door Lock Striker Bolt

IMPORTANT: Remove all lubricants that may have dropped or spread onto the external paint finish.

TYRES

TYRE PLACARD

Each vehicle has an appropriately designed placard adhered to the inside surface of the instrument panel compartment lid. By taking note of the tyre size fitted to the vehicle, the correct inflation pressure for a particular load application can be selected.

At no time should the tyre placard be removed — it is placed there as part of the Australian Design Rule requirements.

NOTE

The tyre placard lists tyre and rim combinations that are approved for fitment to the vehicle. However, for any particular tyre size designation, tyres with a higher speed rating, (refer note on tyre speed rating, page 64) and/or with a maximum load rating in excess of that listed on the placard are also acceptable, provided they are fitted to the nominated rim size. For example:—

TYRE SIZE DESIGNATION		MAXIMUM LOAD RATING	
Listed	Others Acceptable	Listed	Others Acceptable
Y78L13	Y78S13 Y78H13	900 lbs.	Greater than 900 lbs.
ZR70S13	ZR70H13	970 lbs.	Greater than 970 lbs.

TYRE SIZES

Some sizes listed may not be available as Regular Production Options. However, they may be fitted as replacements in an approved manner, provided the rim size specification is suitable as shown on the Tyre Placard.

TYRE CARE

Tyres should be checked regularly for proper inflation pressure, wear, and damage. The following information will assist you in properly caring for your tyres.

OVER INFLATION
Hard Ride, Poor Traction, Fabric Breaks

UNDER INFLATION
Runs Hot, Loosens Cords, Blowouts, Uneven Wear

PROPER INFLATION
Good Ride, Good Traction, Good Wear

TYRE PRESSURE RECOMMENDATIONS

1. Tyre pressures should be checked when the tyres are cold, i.e. when the vehicle has been inoperative for 3 hours or more, or driven less than 2 kilometres (1 mile approximately).

2. Tyre inflation pressure may increase as much as 40 kPa (6 psi) when hot i.e. after the vehicle has been driven 15 kilometres (10 miles) or at speeds of more than 95 km/h (60 mph). Do not bleed or reduce pressures to compensate for this build up.

3. For continuous high speed operation, over 120 km/h (75 mph), increase tyre inflation pressure 30 kPa (4 psi) above the recommended pressures up to a maximum as shown on the Tyre Placard. Sustained speeds above 120 km/h (75 mph) are not recommended when a pressure adjustment would require pressures greater than the maximum pressures.

4. Always use a tyre pressure gauge when checking pressures as the appearance of a tyre can be deceiving, depending on vehicle loading.

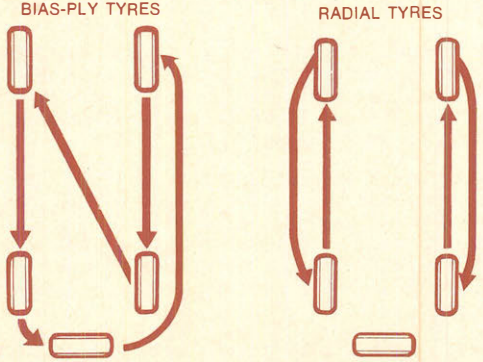
RECOMMENDATIONS ON TYRE ROTATION

Front and rear tyres perform different functions on a vehicle (steering versus propelling the vehicle). Due to their function, front tyres normally experience shoulder wear whilst rear tyres are more prone to crown wear. Tyre rotation may be used to equalize wear between front and rear tyres. (Refer diagram below.)

Tyres should be inspected at the 5000 kilometre inspection and adjustment and then at 10,000 kilometre intervals. If no abnormal or uneven wear is detected, and you have not experienced any vibration problems, the tyres need not be rotated or balanced.

NOTE: Tyres should be rotated prior to regular inspections, if irregular wear develops, ensuring that the reason for the problem is corrected simultaneously.

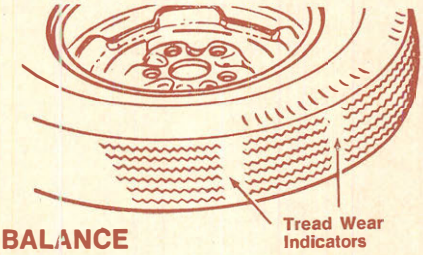
After rotation, tyre pressures should be adjusted in accordance with the recommendations on the tyre placard.



TYRE WEAR

Uneven or abnormal tyre wear is usually the result of incorrect inflation pressure, improper wheel alignment, wheels being out-of-balance, or poor driving habits. Under-inflation, incorrect toe-in or camber and fast cornering produce different types of abnormal wear which can be diagnosed by any GMH Dealer. The original equipment tyres incorporate built-in tread wear bars which act as indicators to assist in determining when the tyres have worn to the point of needing immediate replacement.

CAUTION: When the wear bars appear, tyre replacement should not be delayed, in the interests of safety.



WHEEL BALANCE

Precise wheel and tyre balance is essential if smooth high-speed running and long tyre life are to be obtained. It is advisable to have the wheels and tyres statically and dynamically balanced by a GMH Dealer after every tyre replacement or as required.

VALVE EXTENSIONS

Where supplied valve extensions are fitted to the tyre valve of each wheel. Air will be passed straight through from a pressure connection which can fit over the top of the stem. Also this item removes the need for a valve cap.

TYRE DAMAGE AND REPAIR

Tyres with cuts, splits or cracks deep enough to expose the fabric, should be replaced. Bulges also indicate internal damage, and these tyres should also be replaced. Tyres with doubtful damage should be removed from the wheel and examined by a competent person.

If a pressure loss occurs while driving, do not attempt to drive on the deflated tyre more than is necessary to stop safely. Driving even a short distance on a deflated tyre can damage it beyond repair.

When puncturing objects are removed, repairs will have to be made according to the recommendations of the tyre manufacturer.

It should always be remembered that a tyre which has been repaired may not be able to be operated safely at the rated maxmum speed and due care should be taken.

NOTE: The installation of an inner tube in a repaired tubeless tyre, is recommended.

REPLACEMENT TYRES

When replacing tyres only the size, load range and construction type recommended on the Tyre Placard should be fitted. Use of any other tyre or tyre type may seriously affect ride, handling, speedometer/odometer calibration, vehicle ground clearance and tyre clearance to the body and chassis. The following should also be considered when replacing tyres.

1. To achieve best all round vehicle performance, bias-belted tyres and bias tyres should not be mixed on the same vehicle.
2. Because of possible adverse effects on vehicle handling, do not mix radial ply tyres with other types of tyres.
3. It is recommended that new tyres be installed in pairs and be fitted to the front.
4. When replacing only one tyre, it should be paired with the tyre having the least wear, to equalize braking traction.
5. When replacing original tyres with another size which have a different outside diameter, the speedometer and odometer will be affected unless a different speedometer drive gear is used.

REPLACEMENT WHEELS

When replacing wheels for any reason, care should be taken to ensure that the wheels are equivalent to those removed in diameter, rim width and offset.

TYRE TRACTION

CAUTION: A decrease in driving, cornering, and braking traction occurs when water, snow, ice, gravel, or other material is on the road surface. Driving practices and vehicle speed should be adjusted to the road conditions.

When driving on wet or slushy roads, it is possible for a wedge of water to build up between the tyre and road surface. This phenomenon, known as hydro-planing, may cause partial or complete loss of traction, which adversely affects vehicle control and stopping ability. To reduce the possibility of traction loss, the following precautions should be observed:

1. Reduce speed level during rainstorms or when roads are slushy and if the road has standing water or puddles.
2. Replace tyres when tread wear indicators are visible.
3. Check that tyres are properly inflated for speed range and vehicle loading.

TYRES AND FAST MOTORING

For high speed or improved performance and handling, tyre pressures may be increased at the expense of riding comfort.

With this in mind, we consider it advisable to offer some comments concerning the operation of tyres at high speeds as the maximum permissible speed for a tyre cannot be defined without qualification. For example, the prevailing air temperature, the type of road surface, the inflation pressure, and in particular, whether the vehicle is going to be driven at high speeds for long periods, or whether high speeds will be only for short intervals, are some of the things which must be taken into consideration.

However, it should be noted that all the maximum speed recommendations require the following of the tyres:

1. Good condition, the walls and treads being free of cuts and abrasions,
2. Treads are not excessively worn, tread pattern still being visible over the entire tread surface,
3. The tyres are not retreaded or regrooved,
4. Pressure increases as shown on the Tyre Placard for loading and speed operation.

The Tyre Speed Rating is indicated in the designation of tyre by a letter—

ON BIAS-PLY (CONVENTIONAL) TYRES:—

***W** indicates a speed rating of 135 km/h (85 mph)
— indicates a speed rating of 150 km/h (95 mph)
L indicates a speed rating of 160 km/h (100 mph)
S indicates a speed rating of 175 km/h (110 mph)
H indicates a speed rating of 200 km/h (125 mph)
Examples:Y78-13: Y78L13: Y78S13

ON BELTED-BIAS PLY TYRES:—

Same markings and ratings as Cross-Ply Tyres.
But **"B"** is added to indicate the addition of a belt in the tyre constructon. Examples: YB78S13: ZB78S13
*Applicable where a tyre has a winter tread.

ON RADIAL PLY TYRES:—

— indicates a speed rating of 170 km/h (105 mph)
S indicates a speed rating or 180 km/h(113 mph)
H indicates a speed rating of 210 km/h (130 mph)
Examples:155-R13 : 155SR13 : 155HR13

RADIAL PLY TYRES

Tyres so constructed have Radial marked on the tyre. Because of the stiffening belt under the tread, the ride characteristics of Radial Ply Tyres may be somewhat different from that experienced with conventional tyres. The under-inflated appearance of the radial tyre is normal. Follow the inflation pressure recommended on the Tyre Placard. To achieve the best all-round vehicle performance radial ply tyres should be used at all four wheel positions; that is, radial ply tyres and conventional tyres should not be mixed. When radial ply tyres are fitted, the toe-in setting at the front wheels should be zero if practical, but, the overall setting must be within the normal recommended limits.

IMPORTANT: In very rough country, radial ply tyres should be operated at maximum pressures in order to minimize the possibility of damage to the sidewalls.

HEAVY TREADS

Caution must be exercised when using tyres with heavy treads, including tyres designed to gain traction in bad weather conditions. At sustained high speeds, this type of tyre will run at higher temperatures than standard tyres and consequently should only be operated within the limits recommended by the manufacturer.

Any doubts concerning the fitness of the tyres on your vehicle for the purpose you require should be referred to your GMH Dealer, who will be pleased to advise.

VEHICLE LOADING INFORMATION

OVERLOADING

The components of your vehicle are designed to provide satisfactory service if the vehicle is not loaded in excess of the weight specified.

Overloading can create serious potential safety hazards and can also shorten the service life of your vehicle. Your GMH Dealer can advise you concerning the proper loading conditions.

TYRE MAXIMUM LOAD RATING AND MAXIMUM VEHICLE LOADING

Kerb weight is the weight of an unloaded vehicle which includes the weight of all coolants and lubricants together with a full tank of fuel.

It must be understood that the maximum load rating shown on the tyre placard is not an actual load capacity that can be used for each wheel.

While the tyre manufacturers rate the tyre for this load application at the maximum pressure shown on the placard, the vehicle manufacturer's suspension, ride and handling characteristics must be taken into account. Therefore, the maximum rear axle loading or the maximum loaded vehicle weight should not be exceeded.

TOW BAR LOADS

The load imposed on the tow bar ball must be included in the maximum rear axle loading and the maximum loaded vehicle weight. (Refer also to page 16.)

VEHICLE WEIGHT CHART

Model	Kerb Weight Kg (lbs)	Maximum Rear Axle Loading Kg (lbs)	Maximum Loaded Vehicle Weight Kg (lbs)
Gemini Sedan	900 (1984)	771 (1700)	1370 (3021)
Gemini 'SL' Sedan	908 (2001)	773 (1705)	1371 (3023)
Gemini 'SL' Coupe	894 (1970)	761 (1678)	1357 (2992)

BULB REPLACEMENT

HEADLAMPS

Replacement of these units is recommended only by a GMH Dealer or a competent person, as the aim should be re-checked after replacements in case the setting has been disturbed.

FRONT PARKING AND TURN SIGNAL LAMPS

These lamps are mounted in one combined lamp body and have only one lens. The outer clear section of the lens is the parking lamp and the inner amber section is the turn signal lamp.

To gain access to the bulbs unscrew the two cross-head screws which secure the lens. Take off the lens and the bulb can then be removed.

To remove the bulbs which are the normal bayonet type, use a twisting motion to disengage the lugs and then pull straight out.

Care should be taken to make sure that the lens gasket is not dislodged from its groove in the lamp body during lens removal or replacement.

REAR STOP/TAIL, TURN SIGNAL AND BACK-UP LAMPS

Access to the bulbs for these lamps is gained from inside the luggage compartment. Each bulb holder is removed using a twisting motion which unlocks it from the lamp body. The bulb can then be removed by rotating anti-clockwise to disengage the lugs. The stop/tail lamp bulb has a bayonet cap with offset pins to ensure correct positioning of the filaments. The turn signal and back-up lamp bulbs have an ordinary bayonet cap.

SIDE MARKER LAMPS

The side marker lamps are mounted on the front of the front side panel just back from the headlamps. To gain access to the bulb unscrew the two cross-head screws which secure the lens. Remove the lens and pull the bulb straight out of its socket.

REAR LICENCE PLATE LAMP

This lamp is located in the centre portion of the bumper bar above the licence plate. To gain access to the bulb unscrew the two retaining screws and remove the lens. The bulb, which is a normal bayonet type can then be removed by twisting anti-clockwise to disengage the lugs and then pulling it straight out of its socket.

INSTRUMENT PANEL AND CONSOLE LAMPS

Replacement of these bulbs is recommended only by a GMH Dealer or a competent person as all the instrument wiring and associated attachments are prone to damage if not serviced correctly.

INTERIOR DOME LAMP

To remove insert a small screwdriver in the recess at the rear centre of the lens and gently prise the lens off. The bulb is of the festoon type and can be removed by pulling it straight out from its retaining clips. When replacing the lens insert the lug on the front edge of the lens into the hole provided and then push the rear of the lens up until it is firmly installed.

FUEL ECONOMY

HOW TO IMPROVE IT

How you drive, where you drive, and when you drive; all have an effect on the distance that can be travelled using a given quantity of fuel. The attention you give your vehicle as far as maintenance and repairs are concerned, will also contribute to fuel economy.

FUEL SELECTION:

(Refer to Page 84.)

HARD ACCELERATION:

Fuel can be conserved and engine and tyre life prolonged by avoiding unnecessarily hard acceleration.

STOP-AND-START DRIVING:

Frequent stops and starts during a trip really cuts down on your fuel economy. Plan your short trips to take advantage of through streets. Also, pace your driving to avoid unnecessary stops by observing traffic flow and traffic light co-ordination on the regular routes you use.

SPEED-VERSUS CONSUMPTION:

Excessive speed on the highway raises your fuel consumption. Statistics show that you might save up to 20% on your fuel costs by driving at 80 km/h (50 mph) instead of 110 km/h (70 mph).

ENGINE IDLING:

An idling engine uses fuel. If you have to wait for more than a few minutes, turning off the engine will conserve fuel.

HARD DRIVING IN BUILT UP AREAS:

Energy is wasted as heat when braking. Hard driving up to stopping points is wasting fuel, as energy in the form of fuel is also needed to accelerate again. This situation can often be avoided.

AIR CLEANER ELEMENT:

Your vehicle receives its power from a mixture of fuel and air, so it's important to replace the air cleaner element at the required intervals. A dirty air cleaner element reduces engine efficiency.

ENGINE TUNE:

Overall tuning (a check on timing, distributor points, spark plugs and emission control systems) can improve your vehicle's fuel economy. An "out-of-tune" engine cannot give good fuel economy.

EXCESS WEIGHT:

Fuel economy is related to the work the engine must do. The heavier the load, the more power it takes. Keep excess weight to a minimum.

TYRE INFLATION:

Under inflation not only causes needless wear of the tyres, but can also waste fuel. It's a good idea to check tyre pressures every week, or as needed, for the loads carried.

WHEEL ALIGNMENT:

Incorrect alignment has the effect of dragging the front tyres and causes premature tyre wear. It takes power to work against this extra load which consumes fuel.

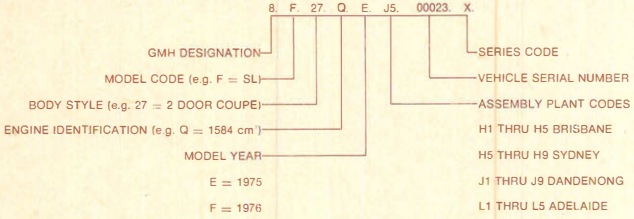
SECTION – 6 SPECIFICATIONS

SERIAL NUMBERS

V.I.N. PLATE
(VEHICLE IDENTIFICATION NUMBER)

Attached to the top right hand side (driver's side) of the radiator support panel.

The table below gives a breakdown of the V.I.N. and the meaning of each section.


8. F. 27. Q. E. J5. 00023. X.
GMH DESIGNATION
MODEL CODE (e.g. F = SL)
BODY STYLE (e.g. 27 = 2 DOOR COUPE)
ENGINE IDENTIFICATION (e.g. Q = 1584 cm³)
MODEL YEAR
E = 1975
F = 1976
SERIES CODE
VEHICLE SERIAL NUMBER
ASSEMBLY PLANT CODES
H1 THRU H5 BRISBANE
H5 THRU H9 SYDNEY
J1 THRU J9 DANDENONG
L1 THRU L5 ADELAIDE

VEHICLE SERIAL NUMBER
(CHASSIS NUMBER)

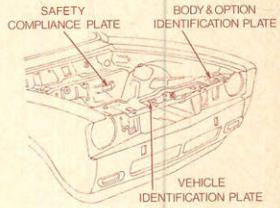
Stamped on the front of the right hand side (driver's side) of the radiator support.

BODY & OPTION IDENTIFICATION PLATE

Attached to the top left hand side (passenger's side) of the radiator support panel under the engine hood. Plate shows Model Number; Body Number; Trim; Paint; Top (i.e. Upper Colour of Two-Tone Colour Unit); Engine, Transmission and Rear Axle Options.

SAFETY COMPLIANCE PLATE

Attached to the lower left hand side (passenger's side) of the dash panel under the engine hood. Shows Vehicle Make, Model and Style; Month and Year of production; Vehicle Serial Number; approved seating capacity: and the Australian Design Rules with which the vehicle complies. (Refer illustration.)



ENGINE NUMBER AND SUFFIX CODE

The engine number is stamped on the front right hand side (driver's side) upper surface of the cylinder block.
The suffix code assigned to the Engine is "Q".
i.e. "Q" signifies — 8.7 to 1 Compression Ratio.

MODEL IDENTIFICATION

Model Range	Model Group	Style Number	V.I.N. Code Number
Gemini Sedan	8TE	69	8E69
Gemini 'SL' Sedan	8TF	69	8F69
Gemini 'SL' Coupe	8TF	27	8F27

WHEEL NUT TORQUES

Recommended Wheel Nut Torque is 75-80 Nm (55-60 lbs. ft.).

VEHICLE DIMENSIONS

ITEM	Millimetres	Inches
OVERALL LENGTH		
ALL MODELS	4133	162.7
OVERALL WIDTH		
ALL MODELS	1570	61.8
OVERALL HEIGHT*		
SEDAN	1318	51.9
COUPE	1296	51.0
WHEELBASE		
ALL MODELS	2404	94.6
TRACK — FRONT AND REAR		
FRONT	1301	51.2
REAR	1318	51.9
MINIMUM GROUND CLEARANCE*		
ALL MODELS	127	5.0

*At Design Load

ENGINE DATA

ENGINE DESIGNATION ►	1600
Piston Disp. Nom.—Cu. Cms.	1584
Piston Disp. Nom.—Cu. Ins.	96.7
Comp. Ratio	8.7 : 1
Petrol Research Octane Rating	89
Number Cylinders	Four
Bore/Stroke mm	82.0 x 75.0
Bore/Stroke ins.	3.23 x 2.95
Taxable H.P. RAC or SAE	16.69
Kilowatts Gross @ R.P.M.	61 @ 5200
Torque NM Gross @ R.P.M.	127 @ 3800
Cylinder Numbering (Front to Rear)	1 - 2 - 3 - 4
Firing Order	1 - 3 - 4 - 2

CAPACITIES

ENGINE OIL

	Litres	Imp. Pints
All Models—Service Refill	**4.6**	**8.1**
— Add for Filter	0.4	0.7

MANUAL TRANSMISSION

4-Speed All Synchromesh	1.25	2.2

AUTOMATIC TRANSMISSION

Service Refill — approximate	2.2	4.0
Dry	6.0	10.7

REAR AXLE

All Models	0.9	1.6

COOLING SYSTEM

All Models	6.0	10.6
Pressure Rating of Radiator Cap	103 kPa (15 PSI)	

FUEL TANK

	Litres	galls.
All Models	52	11.5

NOTE: Use fluid level for final check

CLEARANCES AND SETTINGS

ENGINE TYPE ►	1600
DISTRIBUTOR	
Point Opening	.4/.5 mm (.016/.020 in.)
Cam Angle Dwell	52°
VALVE CLEARANCE	
Inlet — Cold	.15 mm (.006 in.)
— Hot	.25 mm (.010 in.)
Exhaust — Cold	.20 mm (.008 in.)
— Hot	.30 mm (.012 in.)
SPARK PLUG GAP	.7/.8 mm (.028/.031 in.)

CARBURETTOR MIXTURE

The mixture control of the carburettor has been sealed and the idling speed set to comply with the Australian Design Rules. The reason for this is to conform to anti-pollution measures.

Your GMH Dealer has the full information concerning the foregoing.

FUSE SYSTEM

FUSES

The fuse block is located behind a plastic cover at the lower right hand end of the instrument panel, below the hood release. To gain access to the fuses remove the cover by using the two tab grips on either side of the cover. The fuses can be identified by referring to the fuse layout on the reverse side of the cover.

If after replacing a burnt-out fuse, the new fuse burns out, this indicates that the fuse is still overloaded. The cause of the fault should be located and rectified, preferably by a GMH Dealer.

FUSIBLE LINK

In order to reduce the possibility of a fire, whether due to electrical causes or an accident, the wiring harness is protected by the inclusion of a fusible link, located in the harness next to the battery. In case of a short circuit, the link can melt internally, disconnecting the battery by the fusing action. The encasing insulation has been specially designed to withstand the temperature and to contain the fused wires. Thus the fusible link provides a combined fuse and fire protection feature.

DEVICE OR CIRCUIT PROTECTED	FEED CONTROL	FUSE CAPACITY
Windshield Washer Windshield Wiper	ACC or ON on Ignition Switch	15 amps
Instrument Lights Auto. Trans. Console Light	ON on light switch	15 amps
Hazard Warning Lights Turn Signal Lights Cigarette Lighter	Battery	15 amps
Brake Warning Light Back-Up Lamps Gauges/Indicators	ON on Ignition Switch	10 amps
Licence Plate Lamp Tail Lamps and Parking Lamps	ON on light switch	15 amps
Stop Lamps Horns/Clock Interior Lamps	Battery	15 amps
Radio	ACC or ON on Ignition Switch	15 amps
Heater/Defroster Air Conditioner (where fitted)	ON on Ignition Switch	15 amps
Headlamps Switch	Battery	15 amps
Headlamp High Beam	Battery	15 amps
Headlamp Low Beam	Battery	15 amps

HEADLAMP AND BULB SPECIFICATIONS

HEADLAMPS	PART NUMBER	POWER RATING
2 Lamp System — 178 mm (7 in.) Units		
Standard — Toshiba	9826911260	50/40 watt

BULBS	PART NUMBER	POWER RATING
Front Turn Signal	5821940020	21 watt
Parking (Front)	5821940040	5 watt
Tail and Stop (Double Filament)	5821940010	21/5 watt
Rear Turn Signal	5821940020	21 watt
Back Up	5821940020	21 watt
Front Repeater Lamps	5821940060	5 watt
Passenger Compartment (Dome Lamp)	5821940150	10 watt
Licence Plate	5821940050	7.5 watt
Headlamp High Bearm Indicator	9826913970	3.4 watt
Generator Charge Indicator	9826913970	3.4 watt
Oil Pressure Indicator	9826913970	3.4 watt
Brake Warning Indicator	9826913970	3.4 watt
Instrument Panel Illumination	9826913970	3.4 watt
Turn Signal Indicators	9826913970	3.4 watt
Auto. Trans. Floorshift Indicator	9826913970	3.4 watt

N.B. Some of the bulbs listed are subject to model or option selection.

SECTION – 7 OWNER RELATIONS

The satisfaction and goodwill of all owners of General Motors-Holden's products are of primary concern to your Dealer and General Motors-Holden's. Normally, any problems that arise in connection with the sales transaction or the operation of your vehicle will be handled by your Dealer's Sales or Service Departments. It is recognized, however, that despite the best intentions of everyone concerned, misunderstandings will sometimes occur. If you have a problem that has not been handled to your satisfaction through normal channels, we suggest that you take the following steps:—

Step One — Discuss your problem with a member of dealership management. Frequently, complaints are the result of a breakdown in communications which should be quickly resolved. If the problem has already been reviewed with the Sales Manager or Service Manager of the Dealership, contact the General Manager, or the Dealer himself.

Step Two — When it appears that your problem cannot be readily resolved by the dealership without additional assistance, the matter can be brought to the attention of the Zone Owner Relations Manager in your State:

LETTERS SHOULD BE ADDRESSED TO "The Zone Owner Relations Manager" at one of the following locations.
When writing, it greatly assists if you provide the following information:—

YOUR NAME, ADDRESS, TELEPHONE NUMBER
*VEHICLE MODEL and V.I.N.
*VEHICLE DELIVERY DATE AND ODOMETER READING
DEALER'S NAME AND LOCATION
NATURE OF PROBLEM

***N.B.** THIS INFORMATION IS READILY AVAILABLE FROM YOUR WARRANTY CERTIFICATE.

QUEENSLAND
General Motors-Holden's Sales Pty. Ltd.,
Box 728, G.P.O.,
BRISBANE, QLD. 4001.

NEW SOUTH WALES AND A.C.T.
General Motors-Holden's Sales Pty. Ltd.,
Box 4239, G.P.O.,
SYDNEY, N.S.W. 2001.

VICTORIA AND TASMANIA
General Motors-Holden's Sales Pty. Ltd.,
Box 1273L, G.P.O.,
MELBOURNE, VIC. 3001.

SOUTH AUSTRALIA AND NORTHERN TERRITORY
General Motors-Holden's Sales Pty. Ltd.,
Box 96, P.O.,
ELIZABETH, S.A. 5112.

WESTERN AUSTRALIA
General Motors-Holden's Sales Pty. Ltd.,
P.O. Box 426,
WEST PERTH. W.A. 6005.

Step Three — In the unlikely event that after contacting the Zone Owner Relations Manager you are not satisfied, you have another avenue of approach which is, to write to the National **Owner Relations Manager, General Motors-Holden's Sales Pty. Ltd., P.O. Box 5431 C.C., Melbourne, Victoria 3001.**

However, if you contact the Zone or the National Owner Relations Manager, please bear in mind that ultimately the problem will be resolved in the dealership, utilizing the Dealer's facilities, equipment, and personnel. It is suggested, therefore, that you follow the above steps in sequence when pursuing a problem.

SECTION – 8 AUTHORISED GMH DEALERS

QUEENSLAND—METROPOLITAN DEALERS

ALBION
Harrison Car Sales,
Cnr. Frodsham Street and Crosby Road

ASPLEY
Zupp (Aspley) Pty. Ltd.,
1442 Gympie Road

MOOROOKA
John Sivyer Pty. Ltd.,
1606 Ipswich Road

MT. GRAVATT
Zupps Motors Pty. Ltd.,
1310 Logan Road

NEWSTEAD
Eagers Retail Pty. Ltd.,
95 Breakfast Creek Road

NEWSTEAD
Eagers (Trucks),
Evelyn Street

NUNDAH
Eagers (Northside),
Cnr. New Sandgate Road and Wood Street

OXLEY
Miall-Phillips Motors Pty. Ltd.
2193 Ipswich Road

REDCLIFFE
Kevin Healy Motors,
425 Elizabeth Street

STONES CORNER
Leach Motors Southside,
456 Logan Road

TOOWONG
Eagers (Westside),
557-567 Coronation Drive

WINDSOR
Leach Motors,
Newmarket Road

WOOLOONGABBA, South Brisbane
Eagers (Southside),
Cnr. Logan Road and Trafalgar Street

WYNNUM
G. & B. Motors,
200 Tingal Road

VALLEY
Eagers Retail Pty. Ltd.,
Ann and Marshall Streets

AUTHORISED GMH DEALERS

QUEENSLAND—COUNTRY DEALERS & SERVICE DEALERS

ALLORA
ATHERTON
AUGATHELLA
AYR
BARCALDINE
BEAUDESERT
BEENLEIGH
BEERWAH
BIGGENDEN
BILOELA
BLACKALL
BOWEN
BUNDABERG
CABOOLTURE
CAIRNS
CHARTERS TOWERS
CHINCHILLA
CLERMONT
CLEVELAND
CLONCURRY
COOLANGATTA
COOROY
CUNNAMULLA
DALBY
DIRRANBANDI
EMERALD
GATTON
GAYNDAH
GLADSTONE
GOONDIWINDI
GYMPIE
HUGHENDEN
INGHAM
INGLEWOOD
INNISFAIL
IPSWICH
JANDOWAE
JULIA CREEK
KENILWORTH
KILCOY
KINGAROY
LAIDLEY
LONGREACH
MACKAY
MAREEBA
MARYBOROUGH
MILES
MITCHELL
MONTO
MORVEN
MOURA
MT. ISA
MURGON
NAMBOUR
NANANGO
PETRIE
PROSERPINE
QUILPIE
ROCKHAMPTON
ROMA
SOUTHPORT
SPRINGSURE
STANTHORPE
ST. GEORGE
TARA
TEXAS
TOOWOOMBA
TOWNSVILLE
TULLY
WARWICK
WINTON
YULEBA

AUTHORISED GMH DEALERS

NEW SOUTH WALES—METROPOLITAN DEALERS

ARNCLIFFE
Suttons Motors (Arncliffe) Pty. Ltd.,
93 Princes Highway

ASHFIELD
Muirs Motors (Ashfield) Pty. Ltd.,
252 Parramatta Road

AUBURN
Sturgess-Hall Pty. Ltd.,
235 Parramatta Road

BALGOWLAH
Ross Hannon Motors Pty. Ltd.,
164-174 Condamine Street

BANKSTOWN
Boyded Pty. Ltd.,
236-242 South Terrace

BLACKTOWN
Mitchell & Townsend,
Main Street

CABRAMATTA
Ron Hodgson Cabramatta Pty. Ltd.,
266 Hume Highway

CAMPBELLTOWN
Clintons Motors Pty. Ltd.,
3-17 Queen Street

CAMPERDOWN
John A. Gilbert Pty. Ltd.,
36-38 Parramatta Road

CHATSWOOD
Sundell Motors Pty. Ltd.,
815-843 Pacific Highway

CHULLORA
Suttons Motors (Chullora) Pty. Ltd.,
Cnr. Hume Highway & Waterloo Road

CROW'S NEST
J. N. Caldwell (Holdings) Pty. Ltd.,
1 Alexander Street

DEE WHY
Norman G. Booth (Dee Why) Pty. Ltd.,
Cnr. May and Mooramba Roads

HOMEBUSH
Gilbert & Roach Pty. Ltd.,
187 Parramatta Road

HOMEBUSH
Suttons Motors (Homebush) Pty. Ltd.,
112 Parramatta Road

HURSTVILLE
Savell Bros. Pty. Ltd.,
412 Forest Road

KINGSFORD
John Pelligrini Motors Pty. Ltd.,
269 Anzac Parade

KINGSWOOD
Max Wright Motors Pty. Ltd.,
107-119 Great Western Highway

LAKEMBA
R. B. Nash Pty. Ltd.,
1018 Canterbury Road

LIVERPOOL
A. C. McGrath & Company,
2 Atkinson Street

LIVERPOOL
Pat Cullen's Garage,
324-360 Hume Highway

MIRANDA
W. H. Lober (Miranda) Pty. Ltd.,
1-3 Kiora Road

MOSMAN
Norman G. Booth Pty. Ltd.,
501 Military Road

NEWPORT BEACH
Sundell Motors Pittwater Pty. Ltd.,
Barrenjoey Road

PADSTOW
P. W. Bagnall Pty. Ltd.
19 Davies Road

PARRAMATTA
Fair Deal Car Sales Pty. Ltd.
65 Church Street

PARRAMATTA
Hillsdon's Pty. Ltd.,
87 Church Street

PENNANT HILLS
L. W. Vagg & Co. Pty. Ltd.,
351-355 Pennant Hills Road

PETERSHAM
Suttons Motors (Petersham) Pty. Ltd.,
654 Parramatta Road

RANDWICK
Boyded (Randwick) Pty. Ltd.,
265 Avoca Street

ROCKDALE
C. V. Holland Pty. Ltd.,
571 Princes Highway

ROSE BAY
Vern Potts,
505-509 Old South Head Road

RUSHCUTTERS BAY
W. H. Lober & Co. Pty. Ltd.,
49 McLachlan Ave.

RYDE
Muirs Motors (Ryde)
603-605 Victoria Road

ST. MARY'S
Lance Motors Pty. Ltd.,
412 Western Highway

WAITARA
John A. Gilbert (Northside) Pty. Ltd.,
90 Pacific Highway

WINDSOR
Hawkesbury Valley Motors,
George Street

AUTHORISED GMH DEALERS

NEW SOUTH WALES—COUNTRY DEALERS & SERVICE DEALERS

ADELONG
ALBURY
ARDLETHAN
ARMIDALE
BALLINA
BARADINE
BARELLAN
BARHAM
BARRABA
BATHURST
BEGA
BELLINGEN
BELMONT
BLAYNEY
BOGGABRI
BOMBALA
BOOROWA
BOURKE
BOWRAL
BREWARRINA
BROKEN HILL
BULAHDELAH
CANOWINDRA
CASINO
CESSNOCK
COBAR
COFF'S HARBOUR
COLLARENEBRI
CONDOBOLIN
COOLAMON
COOMA
COONABARABRAN
COONAMBLE
COOTAMUNDRA
COROWA
COWRA
CROOKWELL
CULCAIRN
DENILIQUIN
DORRIGO
DUBBO
DUNGOG
EUGOWRA
FINLEY
FORBES
GILGANDRA
GLEN INNES
GLOUCESTER
GOSFORD
GOULBURN
GRAFTON
GRENFELL
GRIFFITH
GULARGAMBONE
GUNDAGAI
GUNNEDAH
GUNNING
GUYRA
HARDEN
HAY
HOLBROOK
INVERELL
JERILDERIE
JUNEE
KANDOS
KATOOMBA
KEMPSEY
KIAMA
KURRI KURRI
KYOGLE
LAKE CARGELLIGO
LEETON
LISMORE
LITHGOW
MACKSVILLE
MAITLAND
MILTON
MOLONG
MOREE
MORUYA
MOSS VALE
MUDGEE
MULLUMBIMBY
MUNGINDI
MURWILLUMBAH
MUSWELLBROOK
NARRABRI
NARRANDERA
NARROMINE
NEWCASTLE
NOWRA
NYNGAN
ORANGE
PARKES
PEAK HILL
PICTON
PORT MACQUARIE
QUEANBEYAN
QUIRINDI
SCONE
SINGLETON
SPRINGWOOD
TAMWORTH
TAREE
TEMORA
TENTERFIELD
TORONTO
TRANGIE
TULLAMORE
TUMBARUMBA
TUMUT
TWEED HEADS
WAGGA
WALCHA
WALLA WALLA
WALGETT
WARIALDA
WARREN
WAUCHOPE
WELLINGTON
WEST WYALONG
WINGHAM
WOLLONGONG
WOODENBONG
WYONG
YASS
YOUNG

AUSTRALIAN CAPITAL TERRITORY—DEALERS

CANBERRA (SUBURBAN LOCATIONS)
BARTON — BRADDON — FYSHWICK — PHILLIP

AUTHORISED GMH DEALERS

VICTORIA—METROPOLITAN DEALERS

BENTLEIGH
Boyanton Wray Pty. Ltd.,
280 Centre Road

BERWICK
Noel Gould Pty. Ltd.,
Princes Highway

BALWYN
Southern Motors Box Hill Pty. Ltd.,
126 Whitehorse Road

BURWOOD
H. C. Dusting & Co. Pty. Ltd.,
1200 Toorak Road

CAULFIELD
Booran Motors Pty. Ltd.,
1049 Glenhuntly Road

CHELSEA
Ron Morphy Motors,
370 Nepean Highway

CHELTENHAM
Mentone Motors (1964) Pty. Ltd.,
1214 Nepean Highway

DANDENONG
Bill Patterson—Cheney Dandenong Pty. Ltd.,
Cheltenham Road

DANDENONG
Preston Motors (Dandenong),
Cnr. Lace and Princes Highway

ELSTERNWICK
Reg. Hunt Motors Pty. Ltd.,
77 Nepean Highway

ESSENDON
Preston Motors (Essendon) Pty. Ltd.,
207-211 Keilor Road

FAWKNER
Bill Patterson Fawkner Pty. Ltd.,
1263 Sydney Road

FERNTREE GULLY
Neilson Motors Pty. Ltd.,
Burwood Road

FOOTSCRAY
Preston Motors (Footscray) Pty. Ltd.,
435 Barkly Street

FRANKSTON
Bayside Motors,
54 Playne Street

GREENSBOROUGH
Watsons of Greensborough,
108 Main Street

HASTINGS
McRaes of Hastings,
762 Hastings Road

LILYDALE
Peter Robinson Motors.
Main Street

MORNINGTON
Barry Sheales Pty. Ltd.,
Main Street

NORTH MELBOURNE
Southern Motors Pty. Ltd.,
19 Flemington Road

OAKLEIGH
Garry & Warren Smith Pty. Ltd.,
1575 Dandenong Road

PRESTON
Campbell's Motors Pty. Ltd.,
518 High Street

RICHMOND
Kellway Egan Pty. Ltd.,
309-313 Bridge Road

RINGWOOD
Bill Patterson Ringwood Pty. Ltd.,
45-57 Maroondah Highway

SOUTH MELBOURNE
Bill Patterson—Cheney Melbourne Pty. Ltd.,
16-50 Sturt Street

SOUTH MELBOURNE
Preston Motors Pty. Ltd.,
132 Sturt Street

SPRINGVALE
Blanchard Motors Pty. Ltd.,
Princes Highway

SUNSHINE
Kevin Dennis Motors (Sunshine) Pty. Ltd.,
272 Ballarat Road

WARRANDYTE
Lloyd Holyoak Motors Pty. Ltd.,
Yarra Street

WERRIBEE
Edward John Motors Pty. Ltd.,
169 Wattan Street

WEST MELBOURNE
Rhodes Motor Co. Pty. Ltd.,
577 King Street

YARRAVILLE
W. H. & S. Massey Pty. Ltd.,
377 Williamstown Road

AUTHORISED GMH DEALERS

VICTORIA—COUNTRY DEALERS & SERVICE DEALERS

ALEXANDRA
ARARAT
BACCHUS MARSH
BAIRNSDALE
BALLARAT
BENALLA
BENDIGO
BERRIWILLOCK
BIRCHIP
BOORT
CAMPERDOWN
CASTERTON
CASTLEMAINE
CHARLTON
COHUNA
COLAC
COLERAINE
CORRYONG
DAYLESFORD
DERRINALLUM
DIMBOOLA
DONALD
DROUIN
ECHUCA
EUROA
FOSTER
GEELONG
HAMILTON
HEALESVILLE
HEATHCOTE
HOPETOUN
HORSHAM
JEPARIT
KANIVA
KERANG
KOOWEERUP
KORUMBURRA
KYABRAM
KYNETON
LANG LANG
LEONGATHA
MAFFRA
MANSFIELD
MARYBOROUGH
MILDURA
MINYIP
MOE
MOOROOPNA
MORTLAKE
MORWELL
MURRAYVILLE
MYRTLEFORD
NAGAMBIE
NATHALIA
NHILL
NULLAWIL
NUMURKAH
NYAH
ORBOST
OUYEN
PORTLAND
PYRAMID HILL
QUAMBATOOK
RAINBOW
ROCHESTER
RUTHERGLEN
SALE
SEA LAKE
SEYMOUR
SHEPPARTON
ST. ARNAUD
STAWELL
SWAN HILL
TALLANGATTA
TERANG
TIMBOON
TRARALGON
UNDERBOOL
WANGARATTA
WARBURTON
WARRACKNABEAL
WARRAGUL
WARRNAMBOOL
WODONGA
WONTHAGGI
WYCHEPROOF
YARRAM
YARRAWONGA
YEA

TASMANIA—METROPOLITAN & COUNTRY DEALERS & SERVICE DEALERS

HOBART — **Nettlefold Car & Truck Pty. Ltd.,**
179 Macquarie Street

HOBART — **Motors Pty. Ltd.,**
179 Macquarie Street

BURNIE — **Motors Pty. Ltd.,**
54 Marine Terrace

DEVONPORT — **Motors Pty. Ltd.,**
24 Best Street

HUONVILLE — **Motors Pty. Ltd.,**
Main Street

KING ISLAND — **King Island Motors,**
Currie

LAUNCESTON — **Motors Pty. Ltd.,**
165 Brisbane Street

LAUNCESTON — **Nettlefold Car & Truck Pty. Ltd.,**
71 Bathurst Street

SMITHTON — **Smithton Motors Pty. Ltd.,**
16 Nelson Street

ULVERSTONE — **Motors Pty. Ltd.,**
99 Reibey Street

AUTHORISED GMH DEALERS

SOUTH AUSTRALIA—METROPOLITAN DEALERS

ADELAIDE
Citystate Motors Pty. Ltd.,
43-69 Sturt Street

ADELAIDE
Freeman Motors Limited,
215 Grenfell Street

ADELAIDE
United Motors Limited,
62-72 Franklin Street

EDWARDSTOWN
Coventry Motors Pty. Ltd.,
1023-1029 South Road

ELIZABETH
Peter Page Pty. Ltd.,
Elizabeth Way

GAWLER
John Doran Pty. Ltd.,
48 Murray Street

MALVERN
Claridge Motors Pty. Ltd.,
361-367 Unley Road

MORPHETT VALE
Coleton Motors Pty. Ltd.,
335-345 Main Road South

PORT ADELAIDE
Smith Motor Co. Pty. Ltd.,
171 Commercial Road

SOMERTON PARK
John H. Ellers Pty. Ltd.,
278-288 Brighton Road

SOUTH AUSTRALIA—COUNTRY DEALERS & SERVICE DEALERS

ARDROSSAN
BALAKLAVA
BERRI
BORDERTOWN
BRINKWORTH
BURRA
CLARE
CLEVE
CRYSTAL BROOK
CUMMINS
EUDUNDA
GLADSTONE
JAMESTOWN
KADINA
KEITH
KIMBA
KINGSCOTE
KINGSTON
LAMEROO
LOXTON
McLAREN VALE
MAITLAND
MALLALA
MANNUM
MENINGIE
MILLICENT
MINLATON
MT. BARKER
MT. GAMBIER
MURRAY BRIDGE
NARACOORTE
NILDOTTIE
ORRORO
PETERBORCUGH
PINNAROO
PORT AUGUSTA
PORT PIRIE
QUORN
RENMARK
SEDAN
STRATHALBYN
STREAKY BAY
TANUNDA
TWO WELLS
VICTOR HARBOR
WAIKERIE
WHYALLA
WOOMERA
WUDINNA
YANKALILLA

NORTHERN TERRITORY—DEALERS

ALICE SPRINGS
Kittle Bros. (Alice Springs) Pty. Ltd.,
Wills Terrace

DARWIN
Suttons Motors (Darwin) Pty. Ltd.,
Cnr. Mitchell and Knuckey Streets

AUTHORISED GMH DEALERS

WESTERN AUSTRALIA—METROPOLITAN DEALERS

BELMONT
Major Motors Pty. Ltd.,
225 Great Eastern Highway

CANNINGTON
Kevin James Pty. Ltd.,
1308 Albany Highway

FREMANTLE
Shack Motors,
59 Queen Victoria Street

GOSNELLS
Lance Gibbons Pty. Ltd.,
2325 Albany Highway

MELVILLE
Melville Motors (1969) Pty. Ltd.,
532-536 Canning Highway

MIDLAND
Webster Motors Pty. Ltd.,
37 Great Northern Highway

MORLEY
Metro Motors (1972) Pty. Ltd.,
212 Walter Road

NAVAL BASE
Shack Motors (Cockburn),
32 Burlington Street

OSBORNE PARK
City Motors Scarborough Pty. Ltd.,
Cnr. Scarborough Beach Rd. & Harbourne St.

PERTH
Attwood Motors Pty. Ltd.,
22 Stirling Street

PERTH
City Motors Pty. Limited,
505 Newcastle Street

PERTH
Sydney Atkinson Motors Limited,
20 Terrace Drive

VICTORIA PARK
Young's W.A. Pty. Ltd.,
529 Albany Highway

WESTERN AUSTRALIA—COUNTRY DEALERS & SERVICE DEALERS

ALBANY
BEVERLEY
BODDINGTON
BOYUP BROOK
BRIDGETOWN
BROOKTON
BROOME
BRUCE ROCK
BUNBURY
BUSSELTON
CARNAMAH
CARNARVON
COLLIE
CORRIGIN
CRANBROOK
DALWALLINU
DERBY
ESPERANCE
GERALDTON
GNOWANGERUP
GOOMALLING
HARVEY
KALGOORLIE
KAMBALDA
KARRATHA
KATANNING
KELLERBERRIN
KULIN
KUNUNURRA
MANJIMUP
MERREDIN
MOORA
MORAWA
MT. BARKER
MULLEWA
NAREMBEEN
NARROGIN
NORTHAM
PINGELLY
PINJARRA
PORT HEDLAND
QUAIRADING
WAGIN
WONGAN HILLS
WYALKATCHEM
WYNDHAM

SECTION – 9 **INDEX**

Accelerator Pedal 27
Air Cleaner 58
Air Conditioning 40-41
Anti-Freeze 57
Anti-Theft Ignition/Steering Lock 18
Appearance Care 43-49
Ash Tray 45
Back-up Lamps 21, 66, 72
Battery Maintenance 58
Bearings—front wheel 60
Before Driving Your Vehicle 5-16
Brake
—Operation 25
—Disc 26
—Drum 26
—Dual Circuit System 26
—Fluid 58
—Parking 27
—Power assisted Note 27
—Warning Indicator 25, 30
Bulb—replacement 66
—Specifications 72
Capacities—fluid 70
Carbon Monoxide Warning 17
Caravan Hauling 14-16
Child & Infant Restraints 13
Cigarette Lighter 32
Clearance & Settings 70
Cleaning
—Exterior 46-49
—Interior 44-45
Clock 29
Clutch Pedal 27
Controls
—Floor 25-27
—Instrument Panel 31-35
—Steering Column 18-19
—Transmission 21-24
Cooling System 56-57
—Anti-Freeze 57
—Capacity 70
—Corrosion Inhibitor 57
—Draining & Flushing 56
—Filling 56
—Radiator Cap Caution 56
—Thermostat 56
Dealer List 73-81
Defroster/Heater 33
Dimensions—Vehicle 69
Distributor—Settings 70
Door Controls 6
Emergency Conditions 36-42
—Emergency Starting 36-37
—Freeing Vehicle from Sand etc. 41
—Radiator Pressure Cap 41
—Towing Disabled Vehicle 42
Engine Oil 50-54
—Capacity 70
—Change Intervals 53
—Consumption 51-52
—Filter 52
—Level 50
—Pressure Indicator 30
—Viscosity Grades 54
Engine—Data 69
—Serial Number 68
Exhaust Gas Warning 17
Exhaust Pollution 17
Filters and Lubricants 60
Fuel
—Capacity 70
—Economy 67
—Filler Cap 84
—Gauge 29
—Requirements 50, 84
Fumes
—Exhaust 17
—Petrol 17
Fuse System 71
Generator Indicator Light 30
Gauges 29
Headlamps 31
—Replacement 72
Heater/Defroster 33
High Beam Indicator Light 30
Highway Safety 5
Horns 19
Identification Number 68
Indicators—Warning 30
Instrument Dials 29
Instrument Panel 28
Instrument Panel Lighting 31
Jacking Instructions 40
Keys 6
Loading Information 65

Lock
—Doors 6
—Engine Hood (Refer Service Station Information)
—Ignition/Steering Lock 18
—Instrument Panel Compartment 7
—Luggage Compartment 7
—Fuel Filler Locking Cap 7
Loose Load and Articles 5
Lubricants 60
Manual Transmission 21
Oil Pressure Indicator Light 30
Owner Relations 73
Parking Brake 27
Power Assisted Brake Note 27
Radiator Pressure Cap 41, 56
Radio 32
Rear Vision Mirrors 8
Running In 2
Safety—Aspects 5
Seat Adjustment 9
Seat Belts
—General Notes 10
—Infant & Child Restraints 13
—Lap/Sash Combination 11-12
—Lap Type 12
Service & Maintenance 50-67
—Air Cleaner 58
—Auto-trans. Fluid Recommendations 55
—Battery 58
—Cooling System 56
—Engine Lubrication 50
—Engine Oil Change Intervals 53
—Engine Oil Consumption 51
—Engine Oil Filter 52
—Engine Oil Level 50
—Engine Oil Viscosity Grades 54
—Fuel Consumption 67
—Fuel Requirements 50
—Lubricants & Filters 60
—Tyres 61
—Vehicle Loading Information 65
Service Station Information 84
Spark Plug—Setting 70
Specifications 68-71
Speedometer and Odometer 29
Starting and Operating 17-35
Temperature Gauge 29
Tools (Refer Wheel Changing) 38
Trailer (Caravan) Hauling 14
—Driving Hints 16
—Permissible Operating Loads 15
Transmission Operating 21-24
—Automatic 22-24
—Manual 21
Turn Signal
—Indication Lights 30
—Operation 19
Tyres 61
Valve Clearance 70
Ventilation Systems 33
Washing 48
Warning Indicators 30
Weights—Vehicle 65
Wheel Bearing—Front 60
Wheel
—Changing 40
—Nut tightening Sequence 40
—Spare Wheel Stowage 38
—Trim Removal 39
Windshield
—Notes 59
—Wipers and Washers 18
Zone Offices 73

SECTION – 10 SERVICE STATION INFORMATION

FUEL FILLER CAP

NOTE: If this cap requires a replacement, only a cap with the same features should be used. Failure to use the correct cap can result in a serious malfunction of the fuel system. Correct replacement caps may be obtained from your GMH Dealer.

LOCATION

The fuel filler cap is located behind the hinged louvre on the right hand side (driver's side) rear roof pillar.

FUEL REQUIREMENT

The vehicle is designed to operate on a good quality clean fuel of at least 89 octane (research rating).
The major Australian Oil Companies produce their petrol according to the following ratings
Regular (Std.) Grade = 89 Petrol Research Octane Rating.
Premium (Super) Grade = 98 Petrol Research Octane Rating.

PETROL FUMES

CAUTION: Petrol is extremely inflammable and highly explosive under certain conditions. Always stop the engine and do not smoke or allow open flames or sparks near the vehicle when refuelling. If petrol fumes are noticed while driving, the cause should be determined and corrected without delay.

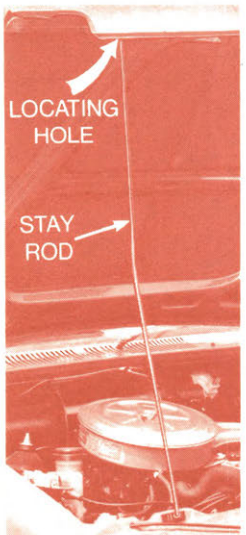
TYRE PRESSURES

Check pressures weekly and adjust as needed. Refer to Tyre Placard located on the inside of the instrument panel compartment.

ENGINE HOOD LOCK AND CATCH

The hood release is operated in two steps by means of a release handle and a separate safety catch. The release handle is located under the driver's side end of the instrument panel.

Pull the release handle to release the lock. The hood will release but is prevented from opening by the safety catch.



The hood can then be opened by pushing in the safety catch lever located in the centre of the vehicle, under the open end of the hood.

The hood can be supported with the stay rod, which is retained by a plastic block on the top of the grill sheet metal by inserting the top end of the rod into the locating hole provided.

To close the engine hood, first lift it clear of the stay rod, and replace the stay rod in its retainer; then lower the engine hood and press it firmly downwards.

Be sure that the lock has been fully engaged.

ENGINE OIL DIPSTICK

Check the oil level as the last operation when stopped for fuel. Maintain oil level within the chequered marks on the dipstick. (Refer to Section 5.)

RADIATOR COOLANT LEVEL

Maintain at 2-3 cm (1 in. approx.) below the bottom of the filler neck. (Refer to Page 56 for further notes.) This should be done on a weekly basis.

BATTERY

Check electrolyte fluid level weekly. If the fluid level is low, add distilled water to bring level to approximately 1 cm (½ in.) above the plates. (Refer to Page 58 for additional information.)

WINDSHIELD WASHER

Check reservoir fluid level weekly. Use a washer fluid additive such as GM Optikleen. (Refer to Page 59 for further notes.)